



ADAMS COUNTY
CLEAR CREEK CORRIDOR
MASTER PLAN

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1 | PLANNING CLEAR CREEK - *WHY NOW?*

PLAN PURPOSE

Adams County is home to over seven miles of Clear Creek – one of the most historically significant and ecologically intact urban watersheds remaining in Colorado. The creek has been a resource for agriculture, industry, circulation and recreation for generations. Rapidly-changing development patterns have forever changed the face of Clear Creek throughout its history – first a pristine natural stream, then a heavily used industrial corridor, and in the future it has the potential to be an ecologically diverse recreational thoroughfare. The trail that runs along Clear Creek is part of the Rocky Mountain Greenway, a planned trail that connects three Denver-area National Wildlife Refuges with Rocky Mountain National Park, and the Peaks to Plains Trail, another trail that will eventually run along Clear Creek from the Eisenhower Tunnel to the South Platte River.

In 2012, Adams County created a new county-wide master plan for parks, recreation, and trails. The 2012 Adams County Open Space, Parks, and Trails Master Plan’s recommendations focused on land acquisition and identifying missing trail segments. Connections to the Clear Creek Trail at Tennyson Street, Lowell Boulevard, and Clay Street were identified in the 2012 plan. Preserving land along river corridors to protect floodplains and

provide recreation opportunities was discussed but no direct correlation was made to Clear Creek. The 2012 plan also identified a need to locate infill park opportunities in the southwest corner of Adams County, near the Clear Creek trail. Little attention was given to the recreational opportunities along the existing trail system, with the exception of a statement that the Clear Creek trail needs to be cleaned up and maintained.

In the years since the Open Space, Parks, and Trails Master Plan was created, citizens reported safety concerns throughout the corridor and safety issues necessitated the closure of an informal trailhead along Clear Creek. As Adams County worked to close the trailhead, it became clear that specific attention should be paid to the entire Clear Creek corridor to ensure current issues could be addressed and future improvements were in line with the community’s needs.

Results from Quality of Life surveys in 2012, 2014, and 2016 also demonstrated the importance of parks and recreation to Adams County’s residents. In the 2014 and 2016 Quality of Life surveys, the open space, parks, and trails system was listed as the most important service Adams County provides for maintaining and improving the quality of life of its residents.

Growing development pressure in the southwest corner of Adams County further contributed to the need for a master plan for the Clear Creek trail corridor. New commuter rail stations at Sheridan, Federal, and Pecos will alter transportation patterns and could spur

redevelopment of properties along the creek. The Clear Creek Corridor Plan provides guidance for improvements that will be necessary to accommodate increased trail users associated with the commuter rail stations and addresses the interface between the trail corridor and adjacent development.

The safety concerns raised by residents, the importance that citizens place on recreational amenities, and the increasing development pressure in the area around Clear Creek propelled Adams County to act to create a plan specific to Clear Creek. The Clear Creek Corridor Plan was meant to take a detailed look at the existing land and amenities along the creek and provide recommendations based on feedback from the community.

USE OF THIS REPORT

The Clear Creek Corridor Plan is an amendment and update to the 2012 Open Space, Parks, and Trails Master Plan as well as the Comprehensive Plan. The plan is meant to be used as a guide in making improvements along the corridor, providing additional amenities, and addressing how adjacent development interacts with the trail.

Addressing existing challenges

Currently, there are a number of challenges to safety, access and maintenance along the corridor, limiting use along the trail and in the surrounding open spaces. Adams County Parks and Open Space staff

have worked to resolve many of these issues, but the need arose for a broad-reaching review of the concerns and a comprehensive solution strategy.

Coordinating current and upcoming projects

This plan has been prepared with extensive guidance from the Adams County Clear Creek Corridor Plan Technical Advisory Committee. This team provided insight from across many public-sector entities addressing the planning, engineering, programming and maintenance of the corridor. This Plan has been prepared with consideration for many ongoing and upcoming improvement efforts within Adams County, the Urban Drainage and Flood Control District, the Clear Creek Watershed Foundation, Regional Transportation District and a number of state wildlife programs with the goal of bridging these projects and strengthening each effort through collaboration.

Anticipating future development demands

Finally, planning and implementation strategies for Clear Creek have been refined through multiple workshopping efforts with Adams County Public Works and Adams County Community and Economic Development staff. This forward-thinking anticipation of the future of Clear Creek ensures the corridor will be enhanced by new growth and investment and celebrated as an asset for future development.

2 | INVENTORY OF EXISTING CONDITIONS

The Clear Creek Corridor is a highly complex riverway with a variety of adjacent land uses and a long history of gold panning, aggregate mining, landfills and industrial practices along its banks. Despite this history, the creek hosts a number of healthy wetland habitats, large stands of lush cottonwood groves, and many miles of riparian ecologies along its banks.

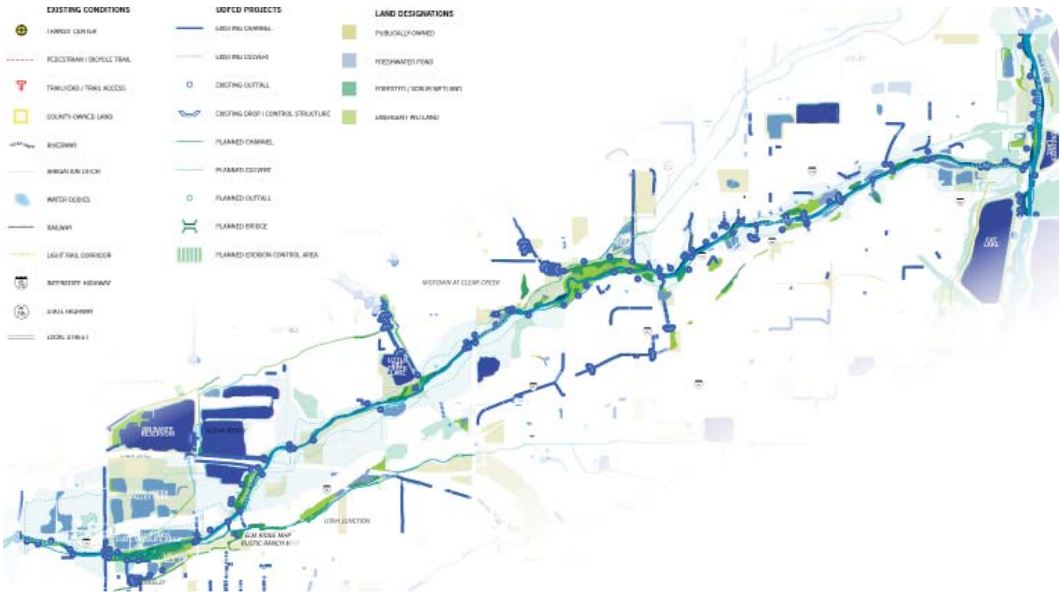
As a constantly-changing area that is seeing a surge in residential and commercial interests and a rapidly-changing transit network, it is difficult to paint a complete picture of the site at a given moment in time. However, the area has been extensively mapped by the County, Urban Drainage and Flood Control District and other entities. These maps provide critical insights into the floodway and surrounding floodplain, transit and trails, existing and past land uses and the various ecological conditions along the creek.

Additionally, first and secondhand observations from the planning team, Technical Advisory Committee (TAC) and members of the public revealed opportunities, challenges and areas of concern for maintenance, recreation and access routes. These were revealed

during a number of planning meetings and catalogued, along with invaluable insights received from the public during public outreach efforts both in-person or via online surveys.

Finally, the planning team and TAC conducted a number of site visits over the course of the planning process, beginning with a group bike tour at the onset of the planning process.

It was concluded during this inventory process that the Clear Creek corridor is relatively unprotected from future development in terms of habitat preservation and would benefit from development standards that address the interface with the creek. Other areas were identified for more significant enhancement efforts as they are either blighted, perceived as unsafe, inaccessible or difficult to access, or otherwise underutilized.



Inventory of hydrology, wetland habitats (ADCO) and stormwater infrastructure (UDFCD) along the Clear Creek Corridor.



Inventory of current zoning designations (ADCO), future rail connections (RTD) and known future development areas (2016 Adams County Making Connections Plan).

HISTORY OF THE ADAMS COUNTY CLEAR CREEK CORRIDOR

Clear Creek extends 66 miles from Loveland Ski Area, through mountain towns along Interstate 70, through Clear Creek Canyon and into the eastern plains where it meets the South Platte River in Adams County. Colorado’s history is deeply intertwined with the Clear Creek Corridor.

Clear Creek was originally boulder-laden, and as such was first labeled “Cannonball Creek” by the hunters and trappers that first camped along its edges. The name was soon changed to “Clear Creek” following the 1859 gold rush that began with the discovery of gold at the confluence of Clear Creek and Ralston Creek, immediately west of what is now Sheridan Boulevard.

The legacy of gold panning along Clear Creek is an important facet of the corridor’s identity, and prospectors from across the region continue to pan the streambed today.

The gold rush quickly moved upstream and into the area now known as Golden and further into Clear Creek Canyon. Communities continued to grow along the creek as the surrounding lands

began to be used for agriculture. Some of the agricultural ditches created at this time still exist along the creek, including Fisher Ditch which extends from 55th and Lowell to Copeland Lake just south west of Washington Street and 62nd Avenue.

Throughout much of the twentieth century, mining efforts continued upstream while industrial uses filled in along the Front Range. Gravel mining grew throughout Adams County as well, and a handful of gravel ponds began to emerge - most of which still remain and have been converted to publically or privately-owned open space amenities including Engineer Lake, within the project area.

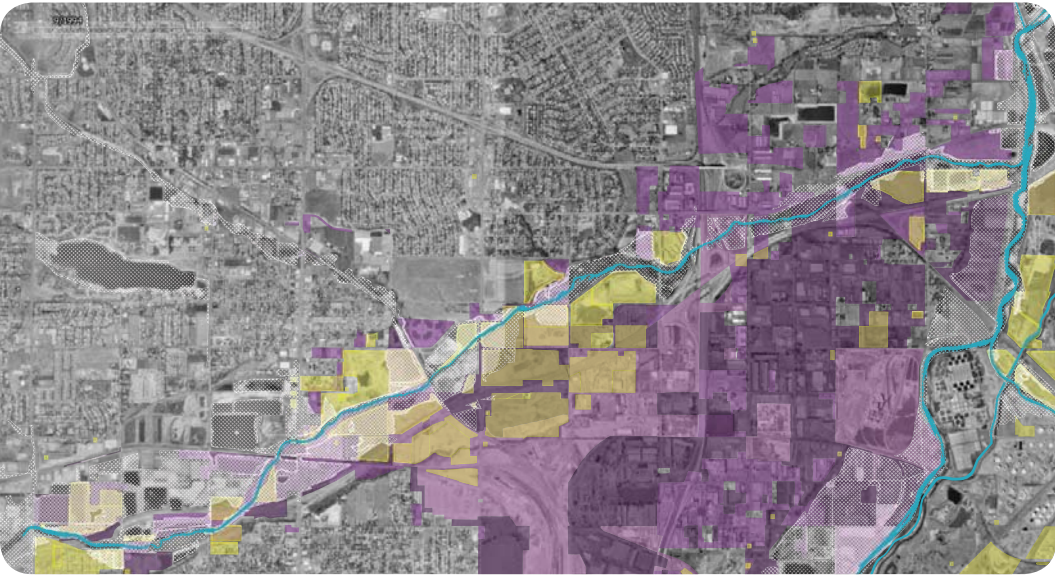
Many of these early heavy industrial uses and landfill operations prompted concerns about contamination and misuse throughout the 1970s and 1980s.

In 1983 the EPA placed much of the Clear Creek river area upstream of Adams County on the National Priority Cleanup List, and study of the corridor and remediation began in the years to follow. Restoration efforts continued throughout the 1990s under the leadership of the Clear Creek Watershed Forum and the Clear Creek Watershed Improvement Initiative, later the Clear Creek Watershed Foundation.

These restoration efforts were largely successful in improving water quality along the river. (See Appendix 01 for April, 2017 water quality report and current CDPHE and EPA statuses and data). However, the water in Adams County’s reach of Clear Creek does not currently meet water quality standards for primary recreation uses. Today, industrial uses continue to dot the areas surrounding Clear Creek, ranging from shipping and light industrial to intensive aggregate mining operations.

Over the last four decades, Adams County Parks and Open Space completed a series of trail connections along the river to complete a continuous trail connection from the

South Platte River to Ralston Creek. This was a tremendous milestone that dramatically increases access to recreation options along the trail and connects the Adams County Clear Creek Corridor to regionwide users.

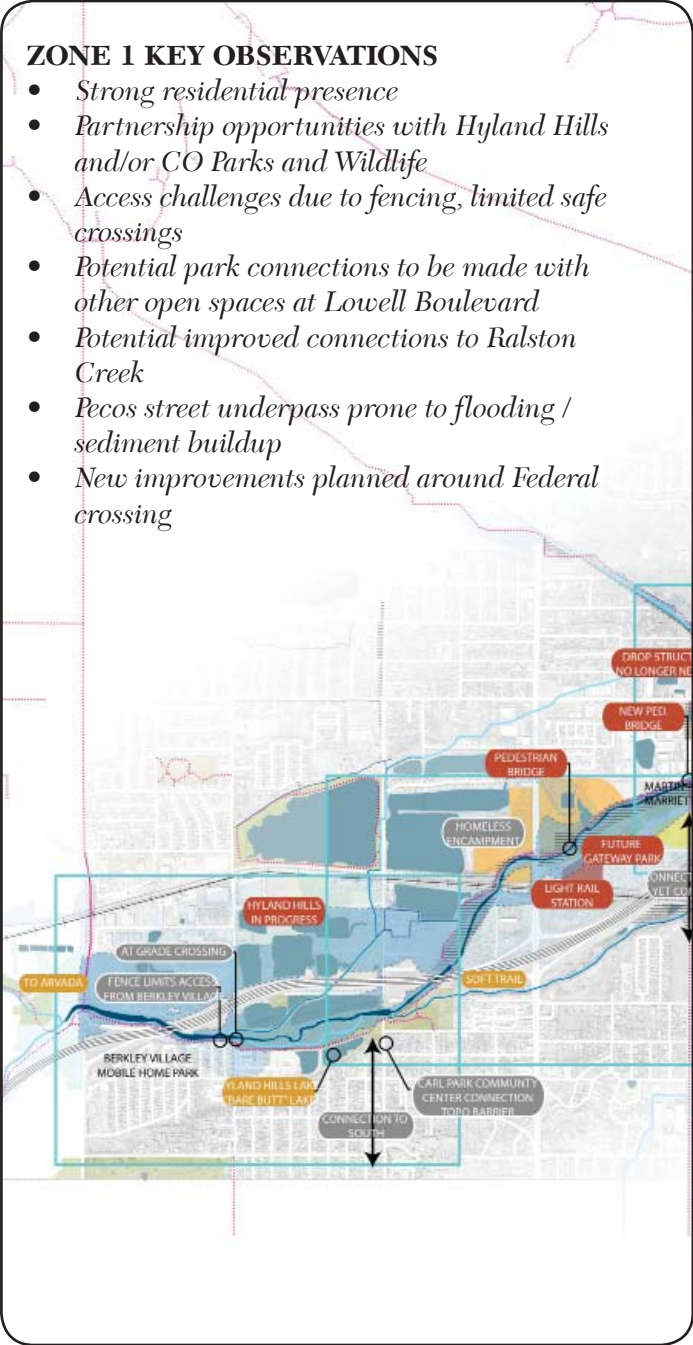


Historic aerial imagery of Clear Creek (1994), showing the current floodplain boundaries (white), industrial and mining uses (purple) and known landfill sites (yellow).

ZONE 1
Sheridan Boulevard to Pecos Street

ZONE 1 KEY OBSERVATIONS

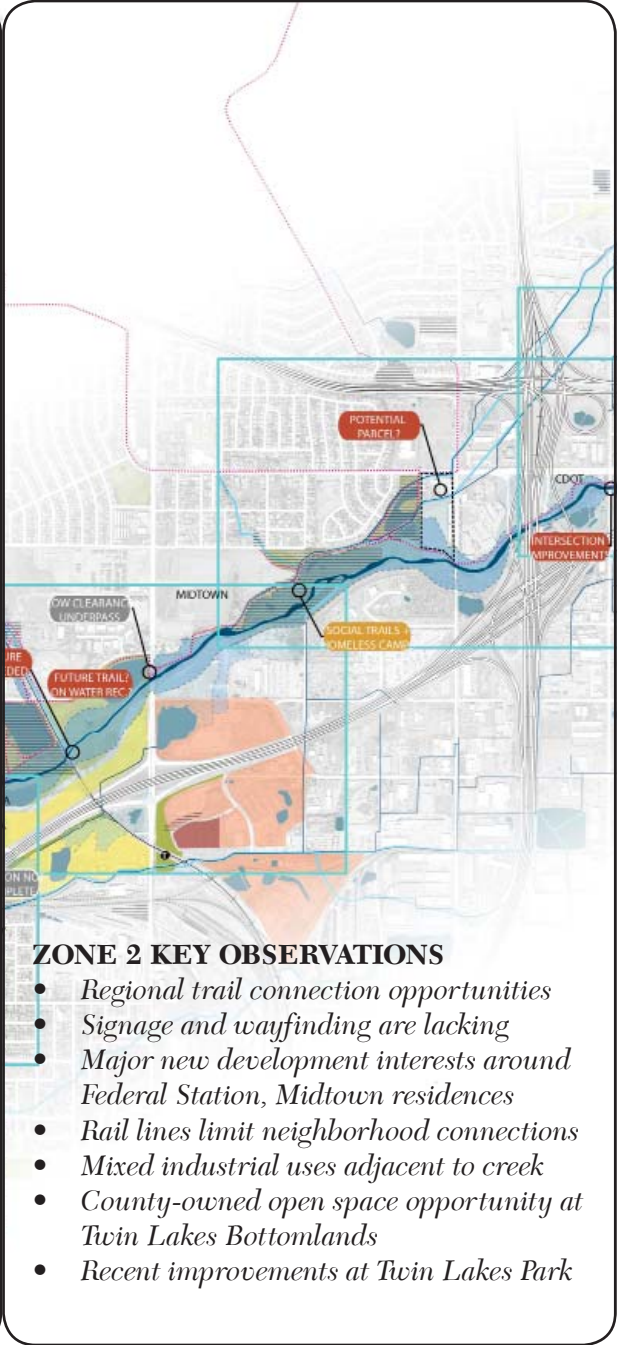
- Strong residential presence
- Partnership opportunities with Hyland Hills and/or CO Parks and Wildlife
- Access challenges due to fencing, limited safe crossings
- Potential park connections to be made with other open spaces at Lowell Boulevard
- Potential improved connections to Ralston Creek
- Pecos street underpass prone to flooding / sediment buildup
- New improvements planned around Federal crossing



ZONE 2
Pecos Street to Washington Street

ZONE 2 KEY OBSERVATIONS

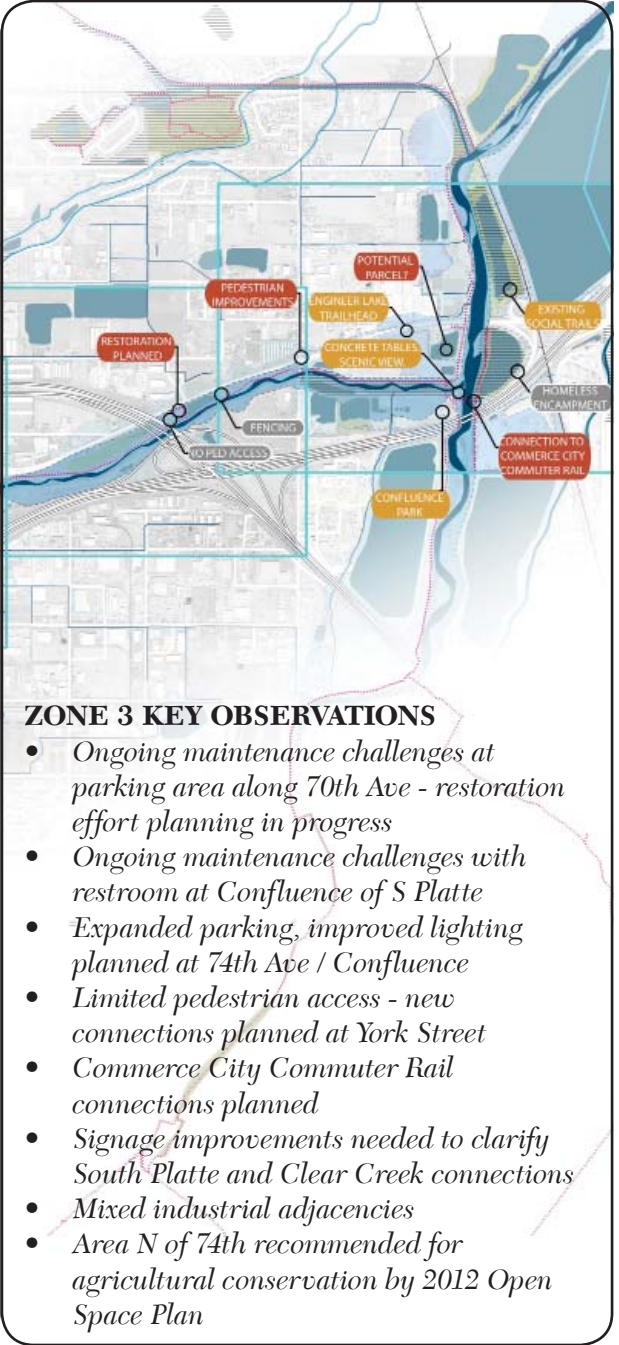
- Regional trail connection opportunities
- Signage and wayfinding are lacking
- Major new development interests around Federal Station, Midtown residences
- Rail lines limit neighborhood connections
- Mixed industrial uses adjacent to creek
- County-owned open space opportunity at Twin Lakes Bottomlands
- Recent improvements at Twin Lakes Park



ZONE 3
Washington Street to S Platte River

ZONE 3 KEY OBSERVATIONS

- Ongoing maintenance challenges at parking area along 70th Ave - restoration effort planning in progress
- Ongoing maintenance challenges with restroom at Confluence of S Platte
- Expanded parking, improved lighting planned at 74th Ave / Confluence
- Limited pedestrian access - new connections planned at York Street
- Commerce City Commuter Rail connections planned
- Signage improvements needed to clarify South Platte and Clear Creek connections
- Mixed industrial adjacencies
- Area N of 74th recommended for agricultural conservation by 2012 Open Space Plan



Bicycle tour observations inventory

SITE ANALYSIS BICYCLE TOUR

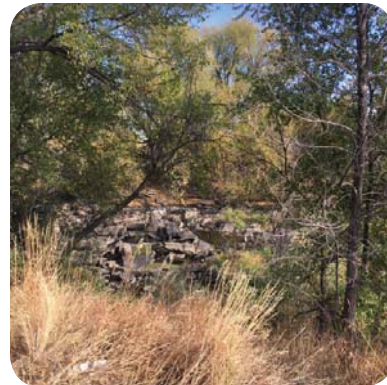
The Planning Team and Technical Advisory Committee kicked off the Corridor planning process with a bicycle tour of the entire Adams County extent of Clear Creek, from Sheridan Boulevard to the South Platte River. The team made a number of stops to discuss areas of concern and opportunities and shed light on past improvements and current project areas. Members of the Parks and Open Space maintenance team described known issues.

Tour attendees were equipped with a tour map package that noted past and current improvement areas, ownership, floodplain and wetland areas, and known future development and station areas.

As the planning team examined the corridor, three distinctive character zones emerged, based on surrounding uses, ecological conditions, ownership types and roadway intersections.

Zone 1 extends from Sheridan Boulevard to Pecos Street, Zone 2 extends from Pecos Street to Washington Street, and Zone 3 extends from Washington Street to the S Platte River Confluence. (See left)

Photos: Wenk Associates



Overgrowth blocking views of Clear Creek



Riprap throughout streambed limits access for recreation or maintenance



Trail signage graffiti



Existing trail between Tennyson Street and Lowell Boulevard



Underpass at Federal Boulevard



Limited informal river access points



Large expanses lack tree cover, busy highways are easily visible



Mixed residential and industrial uses along corridor

ZONE 1

(Sheridan Blvd to Pecos Street)

Zone 1 extends from Sheridan Boulevard (at the confluence of Clear Creek and Ralston Creek) to Zuni Street. An expanded open space area is already emerging from Tennyson Street to Lowell Boulevard adjacent to Lowell Ponds State Wildlife Area. This is an ecologically vital area that lacks formal trails. The new Clear Creek Valley Park provides a number of recreation opportunities to this area.

There are a number of residential areas that surround Zone 1 and they provide an excellent opportunity for new users; however there are extensive tall fences that block access to the trail for these neighborhoods.

New development is planned around the light rail station at Federal Boulevard, but pedestrian access between these areas is still challenging due to surrounding rail lines and limited through-corridors within private property. Future development should be encouraged to increase access points and future roadway plans should include multi-use path extensions along Sheridan, Tennyson, Lowell, Federal and Pecos Streets.

- Between Lowell and Sheridan, expansive extents lack tree canopies that could otherwise provide shade and screen busy highways and rail lines.
- Extensive overgrowth blocks views from the trail to the creek between Lowell and Federal Boulevard
- Wayfinding signage is limited and frequently vandalized. Future signage should examine alternative signage types that are less prone to graffiti.
- Underpasses at Federal and Pecos Street (particularly Pecos) are low-clearance and prone to flooding and sediment buildup.
- Federal Boulevard underpass is an extensive enclosure. Should be well-lit and overpass should sign roadway to help orient trail users, especially with new commuter users anticipated with light rail opening.
- River has been accessed by prospectors, visitors, and some illegal campers, but these access points are not formalized so are difficult to maintain and patrol.
- Industrial and transit adjacencies have limited or no tree cover. Future development should encourage new vegetation and habitat areas.

ZONE 2

(Pecos Street to Washington Street)

Land uses surrounding the central segment of the site area (Pecos Street to Washington Street) are extremely diverse and complex. Little Dry Creek provides a regional trail connection into Westminster and a number of playfields and picnic areas. However, ongoing mining operations and rail corridors limit connections and make wayfinding very difficult.

The Burlington Northern Santa Fe Rail Road Structure (BNSF) drop structure is eight feet in height, which prohibits boating and can be a barrier to fish passage. Current discussions between Adams County, Burlington Northern Santa Fe Railroad, and the Urban Drainage and Flood Control District are focused on replacing the existing drop structure with several smaller drop structures upstream and incorporating recreational amenities south of Little Dry Creek Lake. A partnership between these entities would accomplish many complementary goals. Significant fundraising will be required to complete the project as currently envisioned and the timeline associated with replacing the drop structure are quickly approaching.

The county-owned Clear Creek Bottomlands hosts a number of different wetland ecologies, along with a potential future trail connection via Kalcevic Gulch. As a county-owned site, this is an excellent catalyst site for new restoration and improvement efforts. A new pedestrian crossing and improved trails make the area physically easy to traverse, but it can

feel isolated and additional wayfinding signage is needed. Maintenance of the open space has been difficult due to thick concentrations of Russian Olive trees, which create barriers to access and opportunities for homeless camps. Ongoing efforts to remove Russian olive and other noxious species from this open space have made significant improvements, but more work remains. In addition, the trail in this area is located between an agricultural ditch and a hillside, which creates a narrow access point with many pedestrian bridges that can be a barrier for large machinery.

Further eastward, Twin Lakes Park is a popular park with a number of facilities including visitor parking, restrooms, picnic areas, and a playground. The park will be undergoing a major renovation in 2018. While these new resources are very near the trail, they may go unnoticed by trail users if adequate wayfinding signage is not provided.

- *Future development of mining operations sites should relocate trail along river*
- *Signage and trail connections are lacking and trails are not intuitive at Little Dry Creek connection. Local and regional connections to Westminster trails are unclear.*
- *Existing wetland and upland habitat areas at the Bottomlands are a unique resource and should be protected (minimum) or enhanced (preferred)*
- *Ongoing adjacent development at Midtown and Federal station will increase commuter users*

Photos: Wenk Associates, ADCO



Limited clearance at Pecos Street underpass (see Zone 1 notes)



Existing drop structure at the Lower Clear Creek-Colorado Agricultural Ditch diversion



'Guerilla' wayfinding has been spraypainted at Little Dry Creek trail junctions that lack signage



Improved pedestrian crossing south of Little Dry Creek Lake



Surface mining operations near Little Dry Creek trail



Sandbars create safe river access points



Coyote sighting at Clear Creek Bottomlands



Little Dry Creek Lake



Twin Lakes Park Improvement Area

Photos: Wenk Associates



Chain link fence and barbed wire separate trail from office building



No understory vegetation limits habitat areas



Existing bike/pedestrian crossing at Clear Creek Confluence



Existing restroom at Clear Creek Confluence



South Platte River trail underpass at I-76



Engineer Lake picnic area



Engineer Lake picnic area



Trailhead improvements planned at parking lot near Engineer Lake

ZONE 3

(Washington Street to S Platte River)

Most of the floodplain area between Washington and York Streets is owned by CDOT and is part of a critical transportation corridor adjacent to I-76. Extensive wetlands in this area were developed by CDOT as part of a wetland mitigation program the organization operates. As such, this area serves as an important corridor for wildlife migration. For pedestrians and cyclists this extent feels isolated and lacks emergency access, especially between the I-25 and I-270 overpasses.

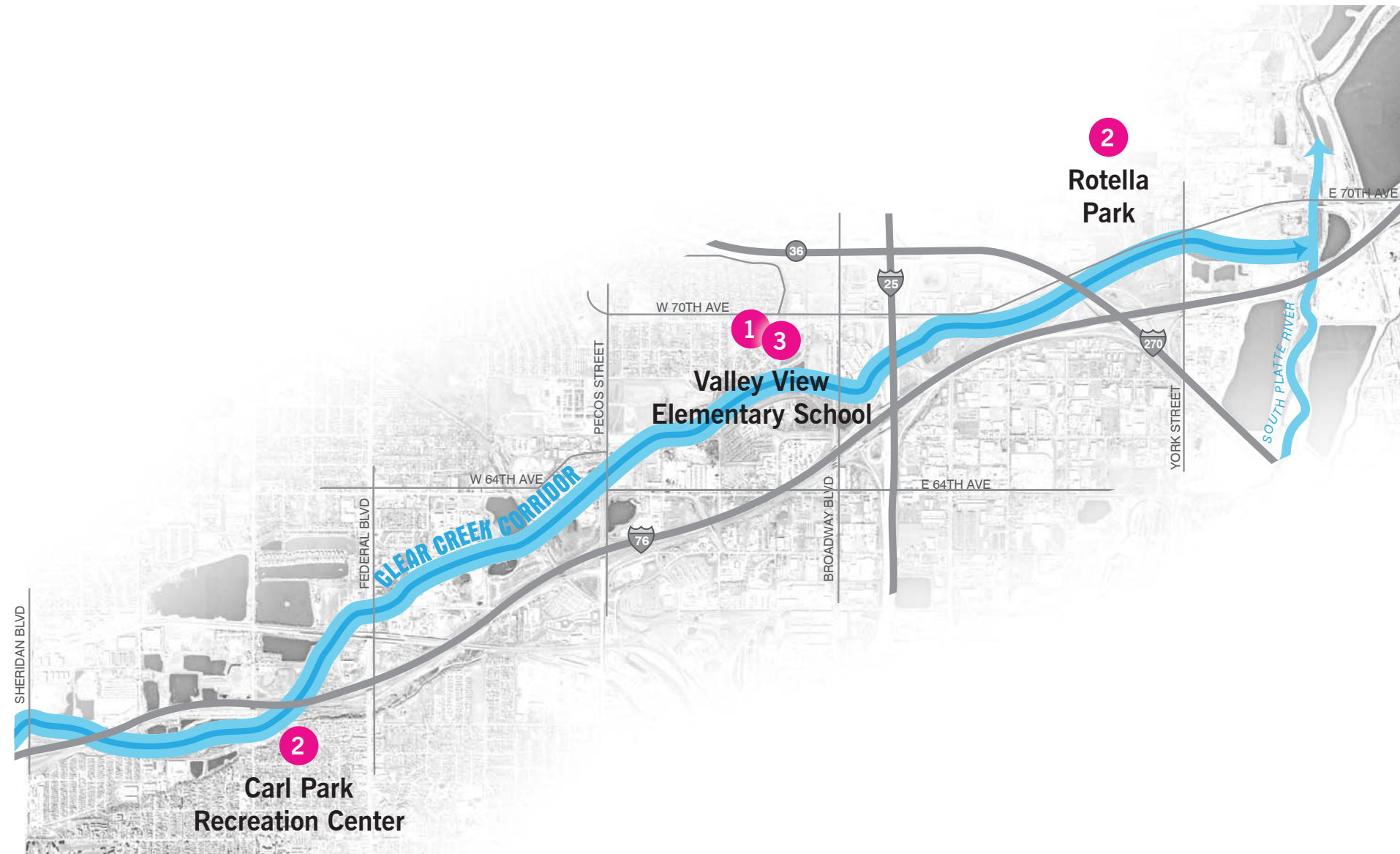
Restoration improvements were recently completed at the open space that sits northeast of I-270 and south of 70th Avenue at the end of Gilpin Way.

Additional pedestrian access between the trail and roadways is planned at York Street by way of an underpass under Highway 224.

The area adjacent to the South Platte River and Clear Creek confluence, as seen on the left, houses a restroom and informational signage. Engineer Lake hosts a large picnic pavilion and the lake may be an opportunity for water recreation. It is a popular destination for remote-control boat users, but access is challenging for elderly and disabled users because of its distance from parking areas across the river.

- *Many of the adjacent properties along this stretch of the Clear Creek Corridor Trail have intentionally limited access between surrounding streets and the trail. Future development should encourage new connections. Additionally areas that must be fenced should utilize vegetated screening to camouflage security fencing and barriers.*
- *Expansive turf lawn at the confluence and a small riparian zone adjacent to the river limits habitat areas. Future improvements should expand the riparian buffer, increase tree canopy and integrate locally-adapted vegetation rather than turf grass.*
- *This is a critical trailhead for both Clear Creek and South Platte River Trail users. Overpasses lack wayfinding to orient trail users*
- *While the open space experience at the Confluence is fairly expansive, little of the land is actually owned by Adams County Parks & Open Space, and much of the land is held by private entities.*

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PUBLIC FEEDBACK PROCESS

The Planning Team relied upon Adams County community members throughout the entire planning process. Outreach efforts were multifaceted and spread across a number of sites in an effort to reach as many residents as possible. Spanish translation was available for all outreach efforts, and the team made additional appearances at neighborhood meetings and with a school parent group. Overall, these efforts reached hundreds of community members across the entire corridor, and fostered extensive insight into the future needs of Clear Creek.

Phase 1 Outreach was held on January 26, 2017 and included a public open house (held at Valley View Elementary School) and online survey to understand current corridor use, existing concerns and desires for future programming. Approximately 60 community members attended the meeting and 385 responded to the survey.

Phase 2 Outreach included a Saturday morning open house at Carl Park recreation center on April 22, 2017, a community “kite day” at Rotella Park on April 27, 2017 and an online survey that defined prioritization strategies for plan recommendations. A total of 54 people attended the two meetings and another 236 responded to the survey.

Phase 3 Outreach was again held at Valley View Elementary School on June 26, 2017, where plan recommendations were reviewed. Almost 50 people attended this session.

INVENTORY +
ANALYSIS
SURVEY #1

A total of 385 community members completed the first survey through a comprehensive, multi-faceted outreach effort. Questions included multiple-choice and open-ended recommendation forums and while the responses varied for each zone, a few overall themes were identified.

Existing concerns are predominantly safety or maintenance-related. Users along the entire corridor called for improved wayfinding and signage, expanded police presence and an increase in waste pickup efforts.

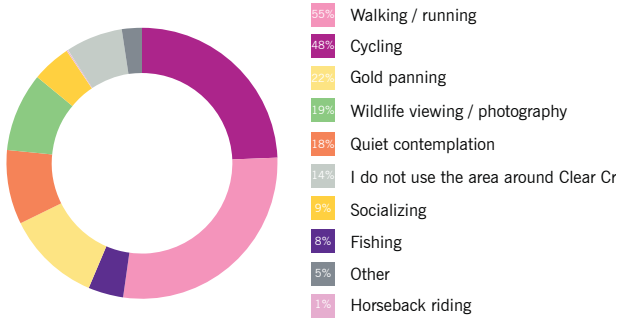
Improved access signage, safety lighting, safe water access, preserved gold panning activities and designated off-leash areas for dogs were among the top recommendations for future uses corridor-wide.

Recreation interests were largely consistent across all three zones.

GENERAL COMMENTS

total recommendations	320
top areas of interest	Delinquency concerns (18%) Maintenance concerns (13%) Access / circulation (12%) Gold panning (12%) Parking (9%) Wayfinding (6%) Dog park (4%)

1) How do you currently use the Clear Creek Corridor from Sheridan Boulevard to the South Platte River?

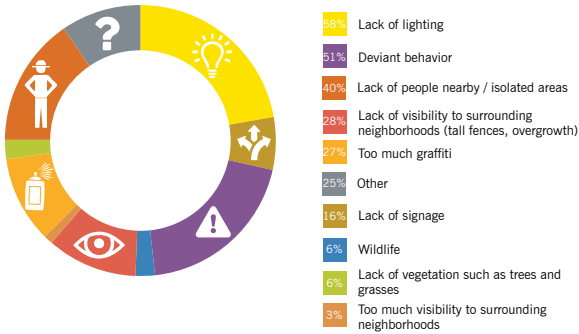


2) What would you like to see in the future along the Clear Creek Corridor from Sheridan Boulevard to the South Platte River?

- “better access and signage for gold panning”
- “cleanup and reopen Lowell Ponds”
- “off-leash dog park that has trees for shade”
- “lighting”
- “improvements to under-bridge paths for when they get flooded”
- “parking and a portolet”
- “better safety and more police patrolling in the area”
- “fix cycling path, wide, add lanes and signage”
- “more trees, more wildlife habitat, safer access/egress for non-human inhabitants needing water to survive”
- “picnic spots, signage for recycling/trash bins”
- “cyclocross racing venue”
- “interpretive signing (history/ecosystems) coordinated among various jurisdictions”



3) If you’ve ever felt uneasy along the Clear Creek trail, please select your top three concerns that have made you feel unsafe.



- “homeless/transient camping along the river and trail”
- “not enough visibility / interconnection into neighborhoods”
- “bicyclers disrespectful to other trail users”
- “lack of wayfinding signage and not certain I am headed in the right direction. lack of confidence = lack of perceived safety and anxiety-inducing
- “no bathrooms close to the river”
- “lack of law enforcement presence”
- “too much trash, after spring floods the paths take months to be cleared”
- “lack of nearby public parking”
- “needs more population density - additional use which creates more safety”
- “dog off leash and dog waste, no enforcement”
- “trash, tall weeds and grass”

ZONE 1

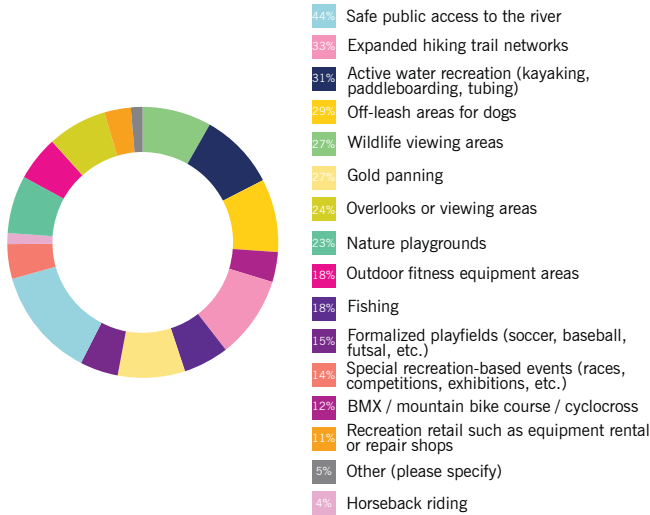
Sheridan Boulevard to Zuni Street
Survey 1 - Questions 4-6

total recommendations	46
top areas of interest	Gold panning (13%) Access/circulation (13%) Maintenance (13%) Safe water access (7%) Parking (7%) Restroom facilities (4%) Retail (4%) Cycling (4%)

4) Have you ever used the Clear Creek Corridor within the Zone 1 Plan Area (Sheridan Blvd to Zuni Street)?

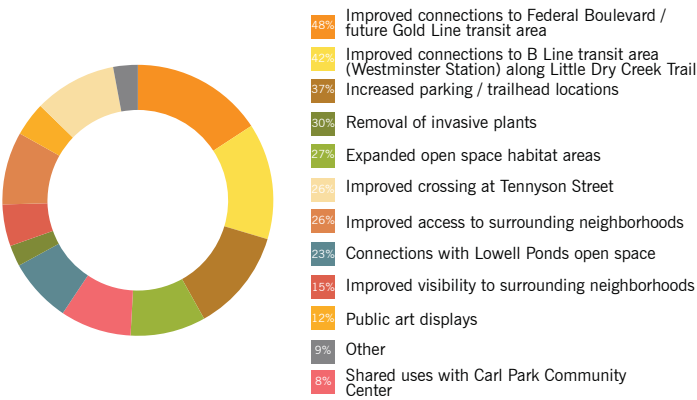
YES	230 responses	65.5%
NO	121 responses	34.5%

5) What type of recreation would you most like to see in the Zone 1 Plan Area?



- “Lowell Ponds would make an excellent site for a nature center or environmental education facility”
- “remove homeless encampments, and clear out weeds. Do not let commercial areas have land on open space.”
- “shade. and connections to the new Hyland Hills Park.”
- “preserve gold mining through panning and sluicing”
- “nice to see rental bikes like at the commuter rail stations and in downtown Denver”
- “increase in bike amenities, riverside restaurants / shops”
- “this area is very industrialized, very polluted, and very unsightly”

6) Which of the following potential improvements to the Zone 1 Plan Area are most important to you?



- “general improved access to major destinations including Hyland Hills Park”
- “wayfinding and destination finding”
- “gold panning”
- please better maintain what is already in existence! invasive plants, like canadian thistle, are taking over!”
- “improved connections, dedicated pedestrian/bike lanes on Lowell, Tennyson, and Sheridan”
- “safe places to park at trailheads. Many cars have been robbed and vandalized”

ZONE 1 FEEDBACK
SURVEY #1

66% of survey respondents have used the Zone 1 area.

Top recreation preferences were:

1. safe river access
2. expanded trail networks
3. active water recreation
4. off-leash areas for dogs
5. wildlife viewing areas
6. gold panning
7. overlooks

The majority of Zone 1 responses highlighted the opportunities presented by Lowell Ponds and Hyland Hills recreation center adjacencies. These areas emerged as natural and recreational resources, with potential for integrated programming, habitat enhancements and educational / interpretive signage.

Bicycle access remains a challenge in this section, and respondents recommended improved trailhead parking areas, bicycle access along roadways and trailside bike share stations.

ZONE 2 FEEDBACK
SURVEY #1

72% of survey respondents had used the Zone 2 area trail.

Top recreation preferences were:

- 1. safe river access
- 2. expanded trail networks
- 3. off-leash areas for dogs
- 4. active water recreation
- 5. wildlife viewing areas
- 6. gold panning
- 7. nature-based children’s play areas

Feedback included a number of requests for improved access and integration with adjacent transit, Little Dry Creek Trail, Little Dry Creek Lake, Twin Lakes, Westminster Station, and the Midtown development area. This included broader area-wide connections, trail and underpass improvements, and linked retail and recreation areas.

ZONE 2

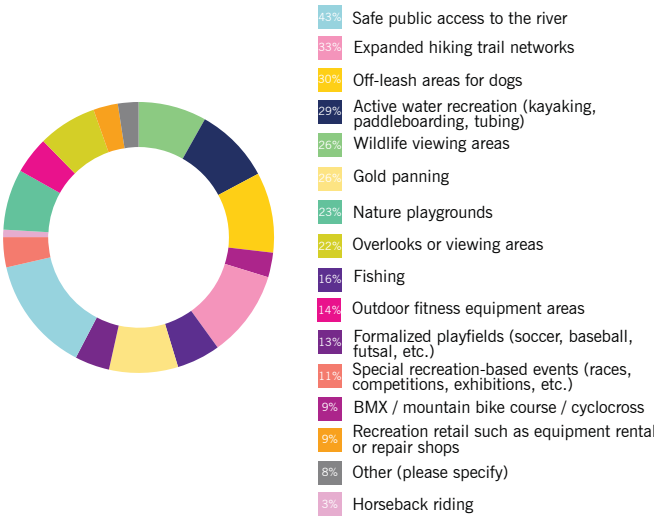
Zuni Street to Washington Street

total recommendations	62
top areas of interest	Access/circulation (18%) Maintenance (13%) Delinquency concerns (11%) Parking (10%) Parking (7%) Gold panning (6%) Retail (6%)

7) Have you ever used the Clear Creek Corridor within the Zone 2 Plan Area (Zuni Street to Washington Street)?

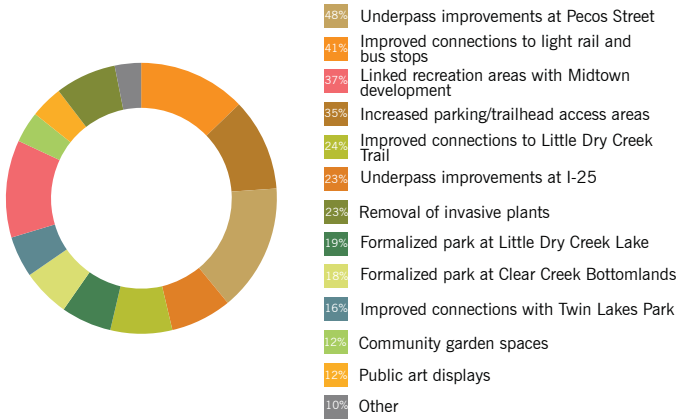
YES	246 responses	72.8%
NO	92 responses	27.2%

8) What type of recreation would you most like to see in the Zone 2 Plan Area?



- “increase in bike amenities, riverside restaurants / shops”
- “1) wayfinding and designation finding 2) removal of graffiti”
- “beautification, patrolling and clearing of camp sites / tent compounds”
- “more parking areas near the river”
- “better drainage in under passes so the cycling path can stay open during spring”
- “flood control. this area usually floods bike park”
- “connect Midtown to the bike trail please”
- “to breathe fresh air in this area, more trees. overbridge or underpass on Pecos and trail access to Midtown”

9) Which of the following potential improvements to the Zone 2 Plan Area are most important to you?



- “Access to Midtown neighborhood east of Pecos Street”
- “recreational gold panning areas”
- “neighborhood connectivity to the Little Dry Creek trail and the commuter rail stations is absolutely imperative”
- “safety and lighting”
- “public safety and law enforcement”

ZONE 3

Washington Street to South Platte River Confluence

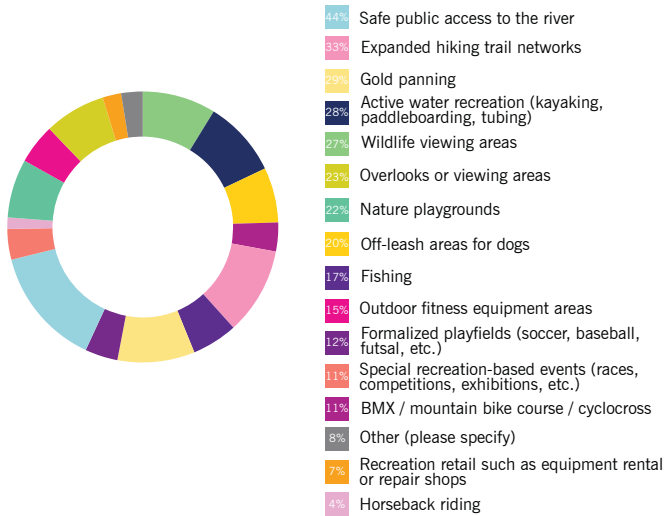
total recommendations 48

- top areas of interest
- Parking (19%)
 - Delinquency concerns (17%)
 - Maintenance (15%)
 - Access/circulation (8%)
 - Safe water access (8%)
 - Gold panning (6%)
 - Wayfinding (6%)

4) Have you ever used the Clear Creek Corridor within the Zone 3 Plan Area (Washington Street to the S Platte River)?

YES	181 responses	54.8%
NO	149 responses	45.2%

What type of recreation would you most like to see in the Zone 3 Plan Area?



"in this section, access to the river is poor. we want to ensure public access to the creek at regularly placed points along the watershed"

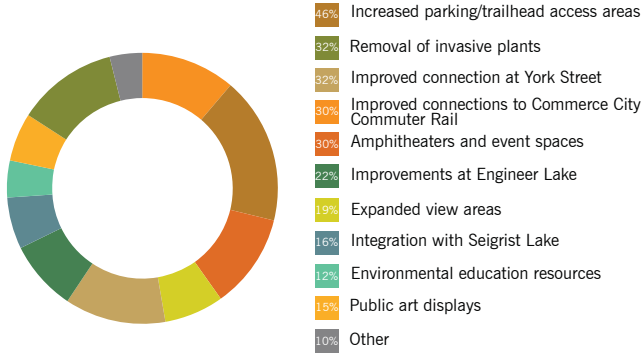
"include an access point with public parking between Washington and I-25 on north side"

"increased habitat restoration"

"more public parking and police presence"

"signs explaining habit/history"

Which of the following potential improvements to the Zone 3 Plan Area are most important to you?



"Mejor seguridad y programación en el Parque Lafayette"

"public parking for gold panning"

"1)wayfinding and destination finding 2) graffiti removal 3) increase of trail users from the Midtown developments off Pecos and 67th Ave should help with providing a greater sense of security"

"bathrooms close to the river"

"getting a bike trail closer/faster to the South Platte trail for quicker access to Downtown Denver"

"better signage to connect South Platte trail, other trails. there are intersections with confusing / inadequate signage"

"fix the bike path cracks, and make it concrete instead of asphalt"

ZONE 3 FEEDBACK

SURVEY #1

55% of survey respondents had used the Zone 3 area trail.

Top recreation preferences were:

1. safe river access
2. expanded trail networks
3. active water recreation
4. gold panning
5. wildlife viewing areas
6. overlook areas
7. nature-based children's play areas

Zone 3 was the least-familiar trail segment to survey respondents. Feedback called for more trailheads and adjacent parking, improved crossing at York Street, and an interest in access to Commerce City commuter rail. There was also support for amphitheaters and event spaces and removal of invasive species.

PUBLIC MEETING #1

The first public meeting, held Thursday, January 26, 2017 was well-attended with at least 60 attendees, all of whom were active and engaged participants in the planning process.

The meeting was conducted as an interactive open house. The first boards presented introduced the corridor and plan scope area and included precedent imagery illustrating a number of potential improvements in

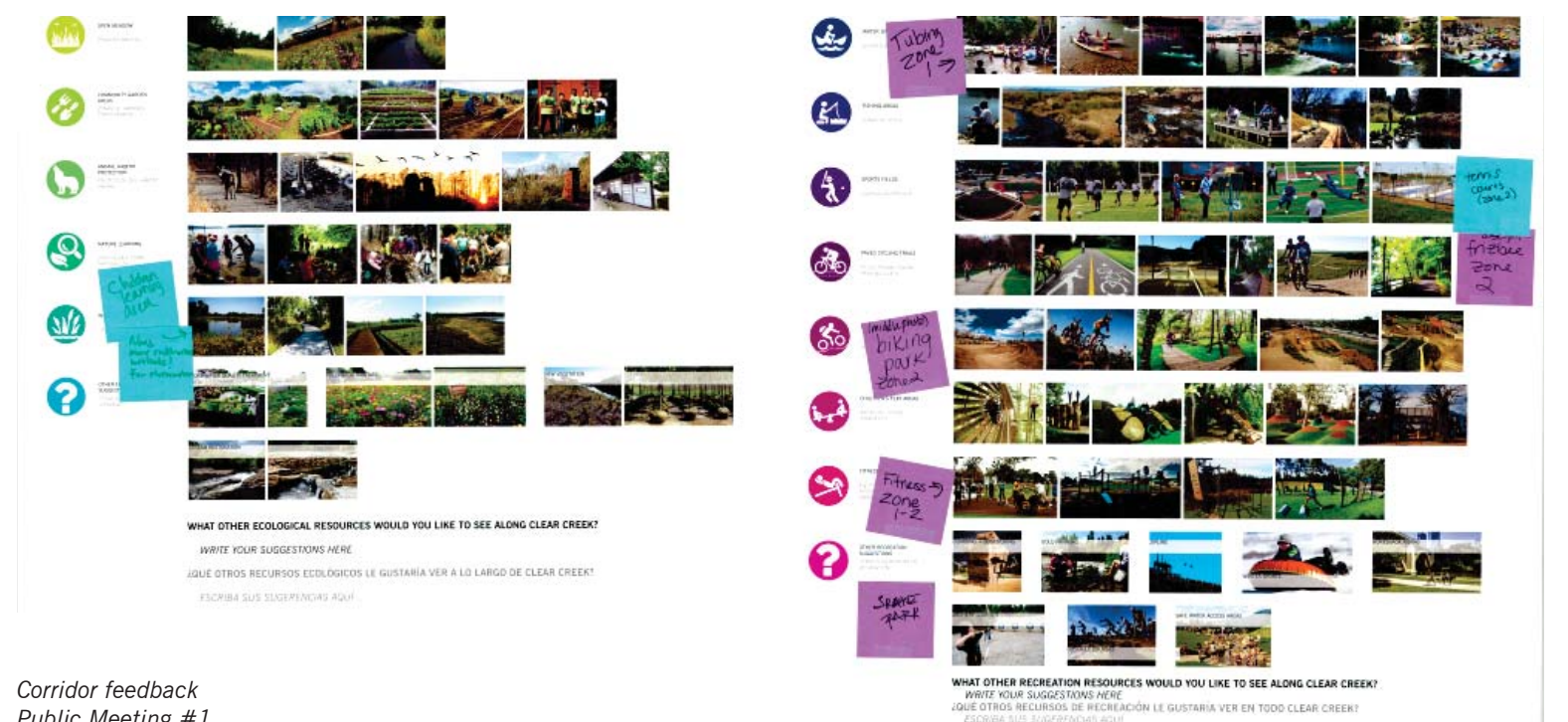
- (1) Recreation Programs
- (2) Ecological Resources and
- (3) Urban Amenities.

Each Zone (1, 2, and 3) was presented on a separate table and programming stickers, pens and notepads for feedback were provided for all attendees.

The feedback was broad-ranging, constructive and highly informative, providing background details not able to be expressed through the survey.



Open house photos
Public Meeting #1



Corridor feedback
Public Meeting #1

PUBLIC MEETING #1 ZONE 2 FEEDBACK

Zone 2 feedback was largely focused on the Midtown and Little Dry Creek interface areas, including the future of the BNSF Drop Structure.

A number of amenities were requested that are not currently available at Midtown including an off-leash dog park with swimming integration, children's play areas, and riverfront dining or retail. Connections to transit areas were noted as lacking and new links would increase trail use for these attendees.

Active river recreation was repeatedly recommended in this area. Attendees also suggested activities not previously mentioned, including tennis, sand volleyball and disc golf.

There is also interest in ecological restoration along this corridor, and strong interest in converting surface mining operations to open space areas when possible.



Zone 2 feedback
Public Meeting #1

PUBLIC
ENGAGEMENT
PHASE 2:
OUTREACH EVENTS

Phase 2 Outreach focused on two outreach events. The first was a “Kite Day” at Rotella Park held on April 27th, 2017, and the second, was an open house at Carl Park Community Center on April 22nd, in which residents were encouraged to walk along the trail and submit their feedback via an online survey.

WHAT WE HEARD FROM
PHASE 2

236 SURVEY RESPONSES
54 PUBLIC MEETING GUESTS
2 PUBLIC OUTREACH EVENTS

*The most important
improvements are:*

BASIC NEEDS

- 1. Improve regional trail and transportation connections
- 2. Increased security presence
- 3. More trailheads

CIRCULATION + ACCESS

- 1. Commerce City Station connection
- 2. Trail connections at Lowell Boulevard
- 3. South Platte River trail integration

RECREATION PLANNING

- 1. South Platte River Confluence Open Space
- 2. Clear Creek Ecological Area at Lowell Ponds
- 3. Ralston Creek Confluence Regional Open Space

YOU ASKED, WE LISTENED.

ADAMS COUNTY

CLEAR CREEK CORRIDOR MASTER PLAN

Adams County is preparing a master plan for the Clear Creek Corridor that will identify potential for recreation and habitat improvements from Sheridan Boulevard to the confluence at the South Platte River. After speaking with over 400 community members, we have begun the next phase of our planning process.

THREE OPPORTUNITIES to take a look at the plan and tell us what you think.

1

Fly kites with us in Rotella Park! (weather permitting)

The planning team will be providing updates on the feedback we've heard so far and offering a sneak peek at plan recommendations. Adams County will provide free kites for everyone who attends!

WHERE
Rotella Park (picnic shelter #3)
1824 Coronado Parkway South
Thornton, CO 80229

WHEN
Thursday, April 20, 2017
(rain date April 27)
Come anytime between 4:30-6:30 p.m.

2

Join us for a breakfast open house!

Come to an open house to see the initial master plan recommendations and share your thoughts on the next steps. Self-guided walking tour maps will be available at the open house for those who wish to look at the Clear Creek Corridor while considering preliminary master plan recommendations.

WHERE
Carl Park Community Center
5401 Meade St., Denver, CO 80221

WHEN
Saturday, April 22, 2017
Come anytime between 9:00-11:00 a.m.

3

Take the next survey!

Visit www.adcogov.org/ccplan for more information and to take Survey #2 in April.

* These are family-friendly events. Spanish interpretation will be provided.

Project contact:
Shannon McDowell
ADCO Parks + Open Space
P: 303.637.8039
E: smcdowell@adcogov.org

Rotella Park Kite Flying Outreach Event

Photos: ADCO

18



Open house photos
Public Meeting #3

Photos: Zoeller Consulting

Keep the use of metal
down to a minimum.
i.e. ~~the~~ porta-potty structures

Could we set up a fund
to encourage or subsidize
the use of rock on concrete
structures?

Thank you for all
of your work on
this! It is so
exciting to see all of
the possibilities.

Puedo sugerir que los ciclistas
tengan como regla usar un
tipo de calakson para protección
de Peatones.
Me parece importante, no por
escuchar que solo una persona
ha muerto por un accidente ciclista

Talli Valenzuela

Meeting very interesting & information
30+ year resident of the area
(80th & York)
Good info on Meeting
Email: [circled] Keep up the Good work!
Bob Swanson

Need vandle resistant
benches every 1/2 miles
or so!

PUBLIC ENGAGEMENT PHASE 3: PLAN UPDATE

The final outreach effort was held at Valley View Elementary School on June 26, 2017. The meeting informed the community of the preferred plan recommendations, the finalized list of Basic Needs, Circulation and Access Plan, Recreation and Program Plan and Development Guidelines. Responses were positive and comment cards were available for additional notes.

The comment cards received at Public Meeting #3 (6 cards received)

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Above: photos of some of the areas that lack “basic needs” as outlined in the following pages. From left: (1) Tennyson Street is the only river crossing between Lowell Boulevard and Sheridan Boulevard, but it lacks a safe pedestrian crossing over the river and lacks both a grade-separated crossing and/or signalized pedestrian crossing. (2) Informal social trails do not provide universal river access and are difficult to patrol and maintain. (3) Vandalism remains an ongoing maintenance concern and raises resident concerns about safety. (4) ADA access is limited or otherwise challenging in many locations, including Engineer Lake (above). (5) Regional trail systems are difficult to navigate without clear wayfinding, so informal signage has been painted on sidewalks in multiple locations. (6) Formal direct river access for recreationalists, gold panners and maintenance teams is limited so informal cut-throughs have been established which can threaten habitat corridors and create opportunities for misuse. (6) Trails can feel isolated and disorienting when set within large expanses of open space and light industrial uses, with many rail and highway crossings. Overhead wayfinding at overpasses and bridges are needed to help orient trail users.

Photos: Wenk Associates

3 | PLAN RECOMMENDATIONS: BASIC NEEDS

Addressing existing challenges

At the project outset, members of the Technical Advisory Committee and Adams County Parks and Open Space staff identified insufficient wayfinding, limited emergency access locations, and limited recreational programs as the key known issues that limit feelings of safety, use and maintenance.

As the public engagement process kicked off, members of the community shared some of these concerns, and also identified a number of other issues that have limited their use of the creek to date.

Finally, the planning team has projected future needs along the creek and trail that will likely arise with the opening of future rail lines, new pedestrian and vehicular connections, and the transformation of formerly industrial or agricultural parcels into residential communities.

The Plan’s response to these existing and anticipated challenges arose as a series of critical corridor-wide improvements, and as such have been identified as “**basic needs**”.

Priority designations and estimated improvements costs for these recommendations are included in the Appendix.

BASIC NEEDS
SAFETY

Above all other concerns, the perception of safety was among the top challenges identified that is limiting current trail use.

Busy at-grade crossings lack signalization and pose risks to pedestrians and cyclists, especially those with young children.

Expansive open spaces can feel isolated and lack clear landmarks, leaving users disoriented. Existing signage installations are often vandalized or rely on text-only content that limits multilingual reading.

A number of users expressed concern about deviant behavior along the trail, especially at underpass areas. This deviancy drives a number of residents to avoid the trails in fear for their safety.

Recommendations for alleviating these concerns include:

Lighting

Underpass lighting should be maintained and meet accessibility standards for brightness and light critical signage. Additional pedestrian and emergency lighting is recommended near all transit stations and street crossings for evening commuters, and from Zuni Street to Lowell Boulevard.

Increased Security Presence

Dedicated, trained trail officers can help with emergency concerns and provide onsite monitoring on a regular basis, in cooperation with the Adams County Sheriff’s Office. Future security strategies should investigate the feasibility of a dedicated trail monitoring staff and/or dedicated volunteer patrol.

Integrated Signage Program

Combine multiple wayfinding, regulatory, and educational signage programs into a cohesive, comprehensive corridor-wide signage family.

Signage should be standardized and maximize the use of universal iconography rather than text and/or both Spanish and English text translations. Thermoplast, colored concrete or painted signage on the trail, graffiti-resistant materials and vandal-resistant signage structures should be used to minimize damage risk.

Potential signage partners include:

- Urban Drainage and Flood Control
- Adams County Public Works
- Clear Creek Watershed Foundation
- Hyland Hills Parks & Recreation
- Colorado Division of Parks and Wildlife
- Educational Stormwater Quality Program (MS4)
- ADCO Floodplain Management Program

Pedestrian Street Safety

Install signalized crossings at two at-grade trail intersections (Tennyson Street and Lowell Boulevard) using a human - activated crosswalk (“H.A.W.K.”) system.



SECURITY PRESENCE



GRAFFITI-RESISTANT, BILINGUAL OR ICON-BASED INTEGRATED SIGNAGE PROGRAMS



HUMAN-ACTIVATED SIGNALIZED CROSSWALKS (“HAWK” CROSSINGS)



IMPROVED LIGHTING AT UNDERPASSES AND TRANSIT STATIONS



EXPANDED PARKING AREAS AT TRAILHEADS



IMPROVED REGIONAL TRAIL CONNECTIONS



BIKE SHARE LOCATIONS



MAINTAINED PORTOILETS ALONG TRAIL

BASIC NEEDS ACCESS

Many residents attributed limited corridor use to limitations that they face in trail access and wayfinding.

Trailhead Resources

Insufficient parking areas and designated trailheads make picnicking, gold panning, and other activities challenging as users are forced to haul unwieldy equipment over long-distances. Parking areas may be easily implemented through strategic partnerships with local businesses if lots can be shared - used for trail access during evening and weekend hours when they are not needed for business hour use.

Residents explained that they would frequently access the trails from light-rail stations, but do not own bicycles or are otherwise unable to transport bicycles to the trail. A trail-wide bike share program or Denver BCycle integration at trailheads and transit stations, along with bike maintenance stations received overwhelming community support both for recreational users and local commuters, who don't feel comfortable locking bicycles at transit stations.

Basic trailhead resources include:

- Dedicated or shared parking area with regular ranger or sheriff monitoring

- Wayfinding signage at trailhead (12 locations)
- Restroom facilities (every 1/2 mile) (2 existing, 4 additional)
- Safety lighting at trailheads (12)
- ADA access

Specialized trailhead resources include:

- Bike share stations (7)
- Outdoor fitness equipment
- Bicycle racks
- Bike repair station every mile (7)

Integrated Trail Programs

Regional trail connections are currently in-place at Ralston Creek, Little Dry Creek and Confluence Park. However, these trail connections are not currently signed along the Clear Creek Corridor, and often go unnoticed. Through expanded wayfinding signage, a streamlined signage family and dedicated mile-markers, the Clear Creek Corridor can be better-integrated into a network of trails that connects to the entire Front Range.



BASIC NEEDS
STEWARDSHIP

The future success of the Clear Creek Corridor relies on a multi-faceted approach to activation, programming, maintenance and safety. Community stewardship broadens the sense of ownership over corridor open spaces and creates new and exciting programs, while increasing eyes on the trail.

Partnerships in education and maintenance programming are fundamental to the success of the Clear Creek Corridor Plan.

Potential Partnership Opportunities

- Hyland Hills Park and Recreation District
- Mapleton Public Schools
- Westminster Public Schools
- Clear Creek Watershed Foundation
- Colorado Division of Parks and Wildlife
- National Audubon Society
- Colorado Department of Transportation (CDOT)
- Local Neighborhood Groups and HOAs
- Local Gold Panning Community
- Ducks Unlimited
- Girl Scouts of America
- Boy Scouts of America

Partnership Spotlight: Regis University

During the planning process, Adams County Parks and Open Space staff met with representatives from recreation, community partnership strategies and transportation within the Regis University staff. These University representatives



ECOLOGICAL EDUCATIONAL PROGRAMS



COOPERATIVE CLEANUP PROGRAMS WITH COMMUNITIES AND INTEREST GROUPS



SAFE RIVER ACCESS, INCLUDING AREAS FOR NON-MECHANIZED GOLD PANNING



EDUCATIONAL SIGNAGE SHOULD BE STANDARDIZED, USE CLEAR ICONOGRAPHY AND/OR ENGLISH AND SPANISH TEXT, AND BE INTEGRATED INTO A LARGER SIGNAGE STRATEGY

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4 | PLAN

RECOMMENDATIONS:

CIRCULATION + ACCESS

Planning connections for the Clear Creek Corridor requires a clear understanding of both current and existing destinations, with special consideration for the current and planned transit network.

Connection types included in the plan are defined as:

Regional Trail Hub

A Regional Trail Hub defines the interface between the Clear Creek Trail and the regional transit network. These critical nodes will be frequented by recreational and commuter users alike, and are likely locations for future commercial activity and ongoing investment. They are critical locations for regional wayfinding and enhanced lighting for commuters. Bike share stations, restroom facilities, and bicycle racks are recommended at these locations.

Regional Trail Connection

A Regional Trail Connection is a connection between the Clear Creek Trail and an intersecting regional trail (Ralston Creek, Little Dry Creek and South Platte River). These areas should include adequate signage for all intersecting trails, including larger networks such as Peaks-to-Plains or the US-36 Bikeway. Bike share stations, restroom facilities, and bicycle racks are recommended at these locations.

Residential Trail Connection

A Residential Trail Connection is an existing or recommended localized trail connection to surrounding neighborhoods via protected, street-adjacent multi-use trail or other trail (Kalcevik Gulch). Multi-modal connections are recommended at transit stations, with facilities that support pedestrian and bicycle commuters including a bike share station, bicycle maintenance stations, water fountains, and bike racks.

Emergency Access

Emergency Access connections provide trail users with access to streets for emergency needs, and County maintenance and patrol teams additional access and reference points for dispatch needs. These do not require specialized amenities but should be at least 10' wide to accommodate one-way emergency traffic and be clearly signed at both the trail and the roadway.

Priority designations and estimated improvements costs for these recommendations are included in the Appendix.

Trail Standards

The following recommendations are intended to maximize safety and accessibility along Clear Creek trails, while providing a diverse array of experiences throughout the open spaces within the corridor.

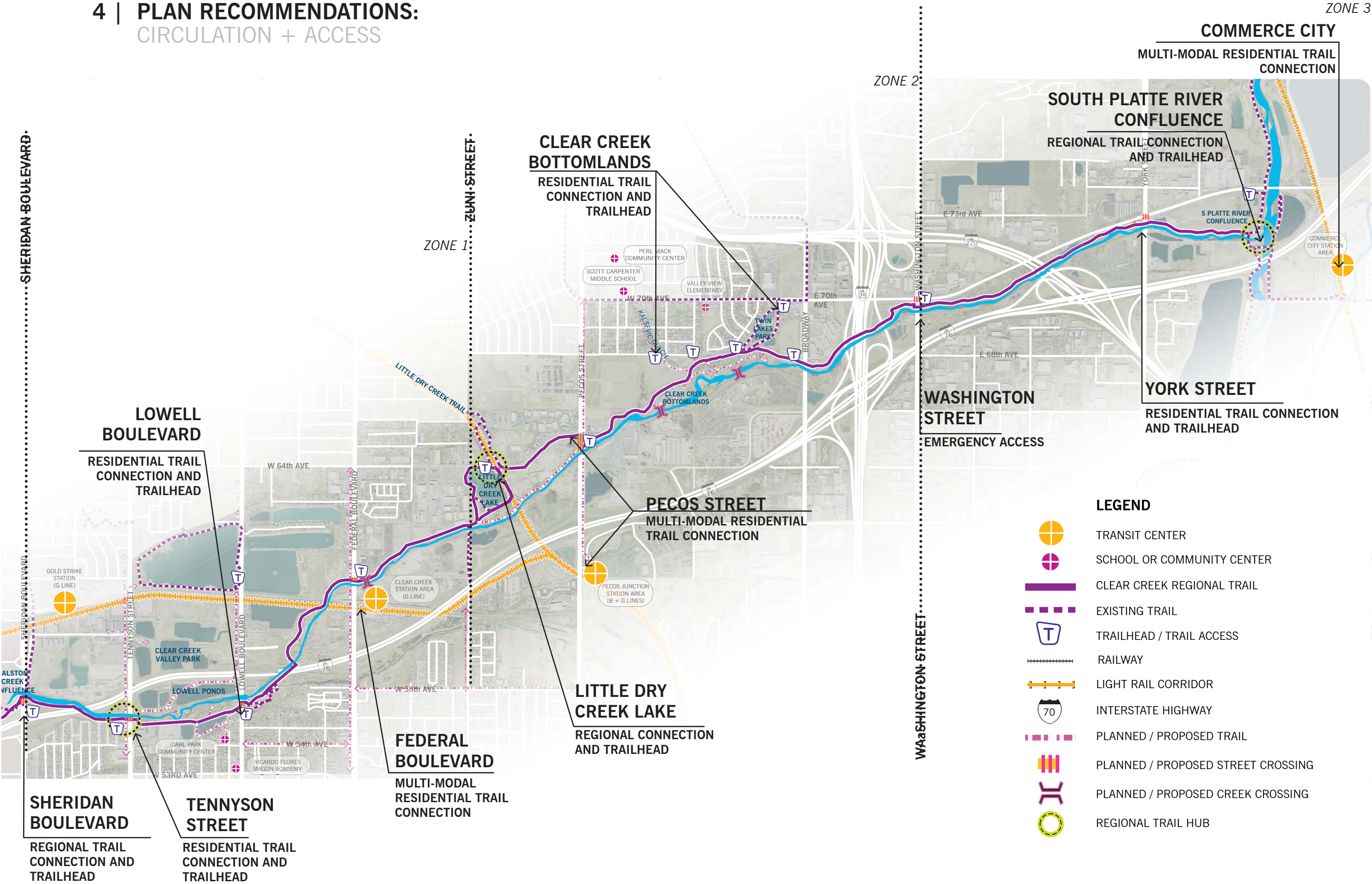
- **Regional trail**
Minimum 10' wide ADA-accessible multi-use concrete path with additional 4' soft surface parallel trail surface adjacent to regional trail and 3' mowed shoulder. Roadway crossings should be grade-separated wherever possible, where street crossing should occur, crosswalk should be signalized with a human-activated crosswalk

("HAWK") system. Regional trail signage and mile markers should be provided at quarter-mile intervals

- **Commuter trails**
8'-10' wide, ADA-accessible concrete multi-use path with 3' mowed shoulder
- **On-street cycling lane**
5' striped (protected) on-street bicycle lane, parallel with traffic flow
- **Pedestrian walks**
6'-8' wide ADA-accessible concrete walk, no bicycles
- **Soft trails**
4'-6' soft trails - acceptable materials include stabilized crusher fines/decomposed granite, rock or wood mulch. ADA accessibility may not be possible on all soft trails but should be pursued wherever possible.

4 | PLAN RECOMMENDATIONS:
CIRCULATION + ACCESS

ZONE 3



ACCESS PLANNING

ZONE 1 | SHERIDAN BOULEVARD TO ZUNI STREET

SHERIDAN BOULEVARD

Improved connection with Gold Strike Park, neighborhood trail signage, safe pedestrian and cyclist crossings. Preferred bike share location because of proximity to transit station.

TENNYSON STREET

Add safe pedestrian and bicycle connections to Arvada Gold Strike Station, Clear Creek Valley Park and Jim Baker Reservoir. Enhanced HAWK crossing at Clear Creek recommended, along with neighborhood signage.

56TH AVENUE AND 54TH AVENUE CYCLING LANES

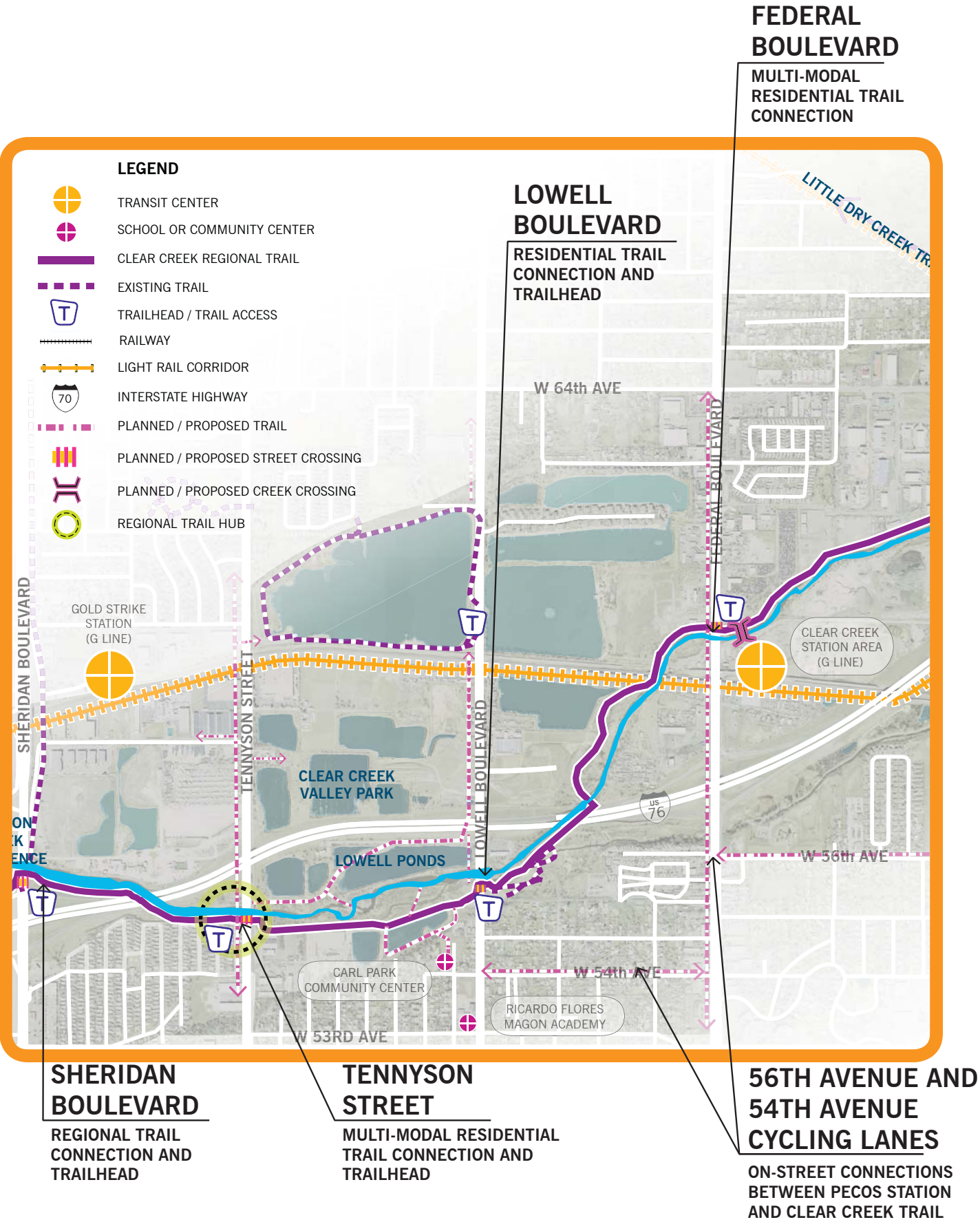
Bicycle connections must be made to connect the Clear Creek Trail to the new Pecos Street Station. Recommend addition of two on-street bicycle lanes along on 54th Avenue (from Federal Boulevard to Lowell Boulevard) and 56th Avenue (from Pecos Street to Federal Boulevard). Wayfinding should include directional signage between trail and transit station at each intersection

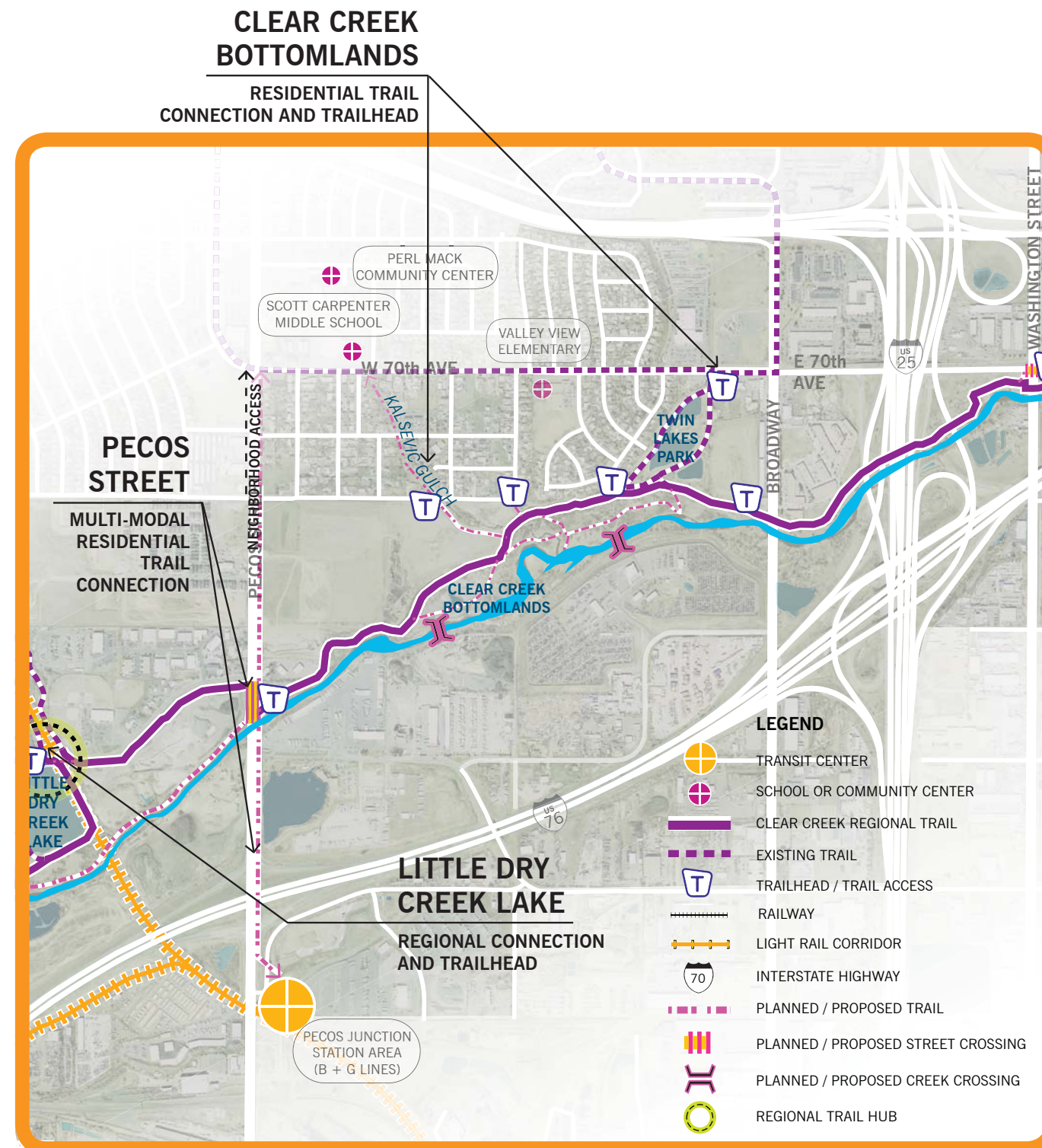
LOWELL BOULEVARD

Complete multi-use trail connections to Jim Baker Reservoir, Clear Creek Valley Park, Lowell Ponds and Carl Park Community Center. A partnership between Hyland Hills Park and Recreation District has been formed to create an off-street trail connection between the Clear Creek Trail and Carl Park Community Center. Neighborhood trail signage will help navigation from Westminster, Arvada and Aloha Beach, Berkeley and Regis University.

FEDERAL BOULEVARD

A pedestrian bridge should be installed east of the Federal Boulevard bridge to allow more direct access for commuters traveling east to the Clear Creek at Federal Station. Additional lighting and wayfinding for neighborhood cyclists recommended. Preferred bike share location because of proximity to transit station.





ACCESS PLANNING

ZONE 2 | ZUNI STREET TO WASHINGTON STREET

PECOS STREET

Long-term bridge replacement plans should accommodate a 10' protected commuter trail along Pecos Street and increased clearance at underpass to accommodate a raised path, minimizing flooding that is currently limiting access and leading to sediment buildup. Short-term improvements include underpass lighting and inter-departmental coordination for ongoing sediment cleanup. Recommend extension of 10' protected multi-use path along Pecos Street between transit station and trail and neighborhood trail signage for Pecos Street Station, Berkley/Zuni and Sunnyside neighborhoods.

LITTLE DRY CREEK LAKE

A county-owned parcel that connects the US-36 bikeway, Westminster Station, Arvada and Westminster. Recommend future expanded parking and trailhead amenities. Future connection along creek and across rail lines should be added. Wayfinding improvements at all trail connections are needed until trail connects alongside Clear Creek.

CLEAR CREEK BOTTOMLANDS

Future trail connections from M. Scott Carpenter Middle School and Valley View Elementary along Kalcevic Gulch open up new outdoor learning environments in the Clear Creek Bottomlands. Limited soft trails provide access to these areas while preserving wildlife habitats. Recommend completing the Kalcevic Gulch connection (0.28 miles) from 68th-70th Avenue along the existing gulch easement to link M. Scott Carpenter Middle School and the Clear Creek Bottomlands.

ZONE 3 | WASHINGTON STREET TO THE SOUTH PLATTE RIVER

Trail connections in this area are challenging as the adjacent Highway 224 (north of the trail) lacks any pedestrian access and the raised US-76 highway blocks access from the south. Maintenance and emergency access requires the addition of a drivable (10' min.) trail access from 70th Avenue. Any long-term bridge improvements or replacement plans should accommodate a mixed-use trail along Washington Street to connect the North Washington and Welby neighborhoods.

Planned improvements include new sidewalks on the west side of York Street and an underpass under Highway 224 that connects to the Clear Creek Trail. Additional neighborhood signage recommended.

Parking, restroom, lighting, and pedestrian improvements are currently underway. Adams County is currently working to improve the parking area by creating a formal trailhead parking lot. The restroom at the confluence of Clear Creek and the South Platte River is a continual target for vandalism, but is also heavily used. Bathroom alternatives should be explored that would reduce maintenance costs and periods of inaccessibility. Signage and wayfinding should be added to the entire system, but particularly at the confluence. This area has many connecting trails with little guidance for the user as to which one leads in a particular direction. Additionally, there is a need for more direct ADA access to Engineer Lake.

LEGEND

- TRANSIT CENTER
- SCHOOL OR COMMUNITY CENTER
- CLEAR CREEK REGIONAL TRAIL
- EXISTING TRAIL
- TRAILHEAD / TRAIL ACCESS
- RAILWAY
- LIGHT RAIL CORRIDOR
- INTERSTATE HIGHWAY
- PLANNED / PROPOSED TRAIL
- PLANNED / PROPOSED STREET CROSSING
- PLANNED / PROPOSED CREEK CROSSING
- REGIONAL TRAIL HUB

SOUTH PLATTE RIVER CONFLUENCE

REGIONAL TRAIL CONNECTION AND TRAILHEAD

YORK STREET

COMMERCIAL TRAIL CONNECTION AND TRAILHEAD

WASHINGTON STREET

EMERGENCY ACCESS

COMMERCE CITY

MULTI-MODAL RESIDENTIAL TRAIL CONNECTION

S PLATTE RIVER CONFLUENCE

E 73rd AVE

US 270

US 16

COMMERCE CITY STATION AREA

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5 | PLAN RECOMMENDATIONS: RECREATION PLANNING

In the first Outreach phase, the Planning Team presented the community with many recreational options for the corridor, ranging from paddleboarding and kayaking to dog parks, bicycle pump-tracks and disc golf. Feedback was broad-ranging and highly imaginative, but one overwhelming common theme remained: any recommendations must first and foremost “protect the river habitat”.

There is little available information on biological and ecological conditions for the Adams County reach of Clear Creek. A comprehensive inventory of these conditions should be completed and used to prioritize future habitat improvements along the creek.

As development demands increase and the area becomes increasingly populated, the promise of a wildland respite within the county - as some of these areas currently provide - will be an invaluable resource to the community. As planning continued and the Technical Advisory Committee lent insight into implementation and maintenance of various programs, sites were identified that could support

more intensive recreation (supported by strategic partnerships) while others were designated for conservation and restoration. This plan provides guidance for improvements that could take place over the next twenty years or more. Some of the recommendations in this plan include opportunities for water recreation in the creek. Implementation of water recreation recommendations would be subject to favorable water quality conditions or restrictions that protect potential users.

TYPES OF RECREATIONAL AREAS

Regional Open Space

A critical regional trail intersection and landmark for social activities such as special events, areas for lounging, picnicking, and educational engagement with the site history. There are three Regional Open Spaces proposed within the following plan and they vary in their program, but each offers a specialized habitat and program-based theme that will draw trail users county and city-wide. These open space areas are less intensively trafficked than a Station Area Park, but provide expanded open spaces and trail networks.

Station Area Park

A recreational destination with specialized land and water-based experiences that will draw users region-wide via light-rail access. These programs should be provided in partnership with local businesses, non-profits, or other governmental agencies whenever possible. Iconic landmarks such as public art and recreation-based retail define these zones as activity hubs. Station Area Parks are smaller in scale than Regional Open Spaces and they are more closely integrated with existing or anticipated development around transit areas.

Ecological Area

These “Ecological Areas” should support low-impact recreational programming only, in an effort to encourage restoration and ecological enhancement efforts. These protections will allow new uses to enter into these areas, including education programs, fishing, outdoor classrooms, and wildlife observation.

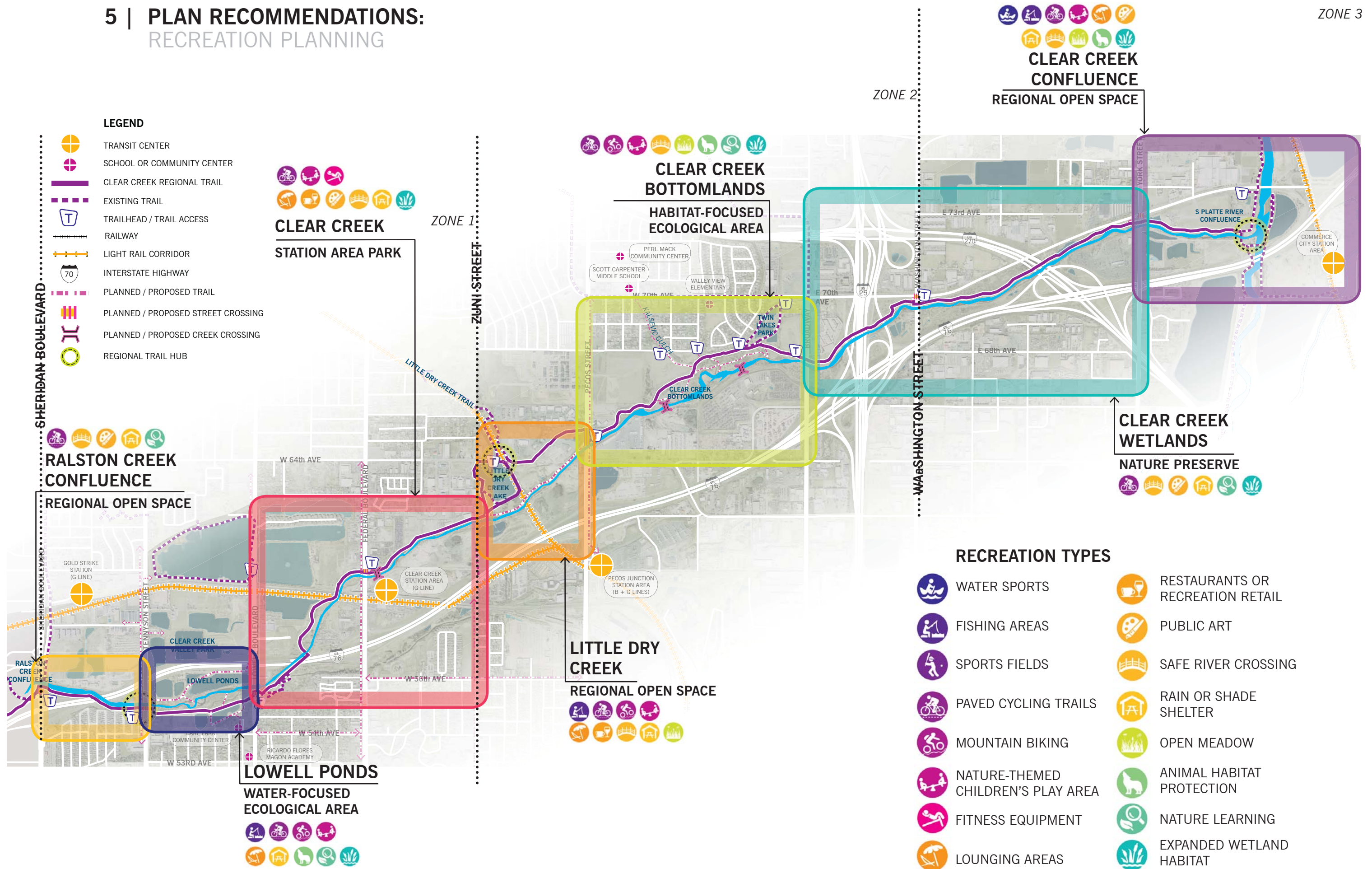
Nature Preserve

Limited access area that is designated for safe habitat movement and wetland and upland restoration. Educational signage can enlighten visitors but circulation is largely limited to the Clear Creek Trail. This has been planned at one location along the trail (designated as the “Clear Creek

Wetlands”). At this location, regulatory wetland habitats have already been identified and surrounding highways, minimal maintenance access and ongoing industrial uses currently threaten the long-term health of the corridor.

5 | PLAN RECOMMENDATIONS: RECREATION PLANNING

ZONE 3



ZONE 1 RECREATION RALSTON CREEK CONFLUENCE

REGIONAL OPEN SPACE

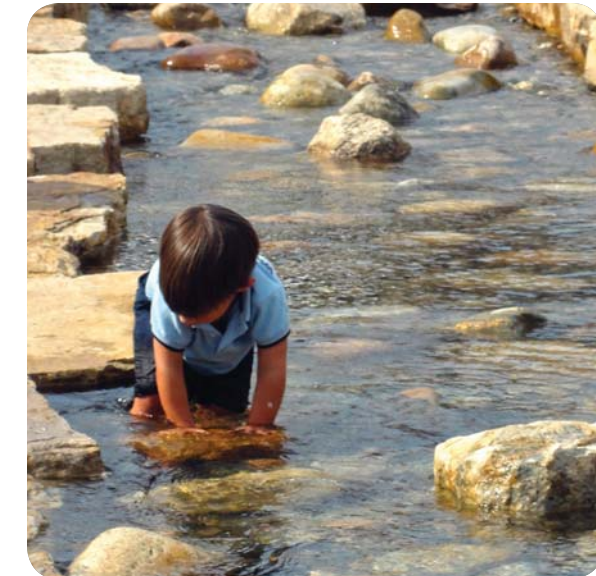
An iconic connection between Arvada's Gold Strike Park and Adams County Open Space, including pedestrian walks, soft trails, public art destination picnic areas, safe river access, nature learning and interpretive signage about gold panning and the history of Clear Creek.



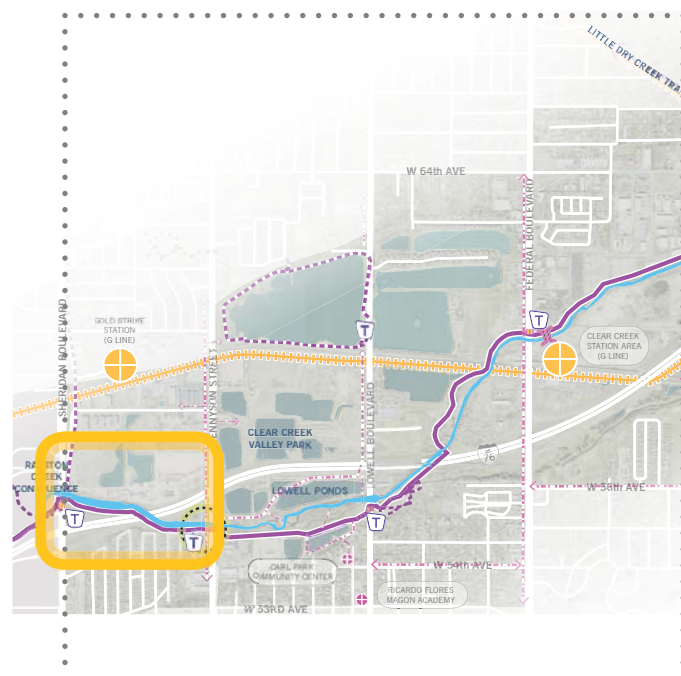
PAVED CYCLING TRAILS



Gold panning education and access



Nature play areas



* See page 26 for trail designations



PUBLIC ART



SAFE RIVER CROSSING



RAIN OR SHADE SHELTER



NATURE LEARNING



Interpretive signage



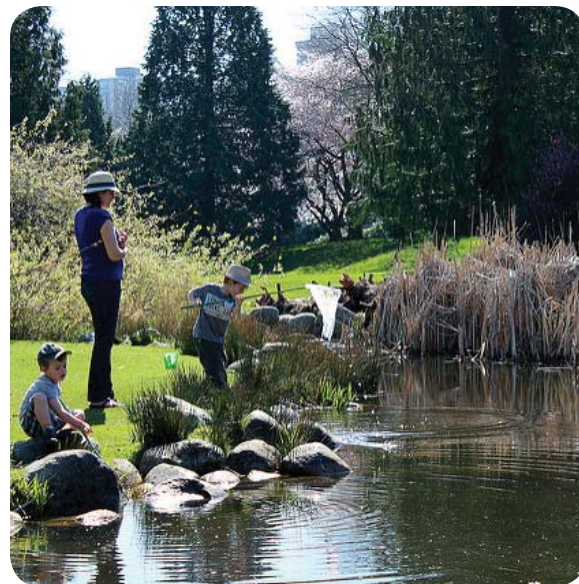
Picnic shelters



Designated bird-watching areas



Educational programming



Accessible fishing areas



Designated soft-trails

FISHING AREAS



PAVED CYCLING TRAILS



MOUNTAIN BIKING



LOUNGING AREAS



RAIN OR SHADE SHELTER



ANIMAL HABITAT PROTECTION



NATURE LEARNING



EXPANDED WETLAND HABITAT

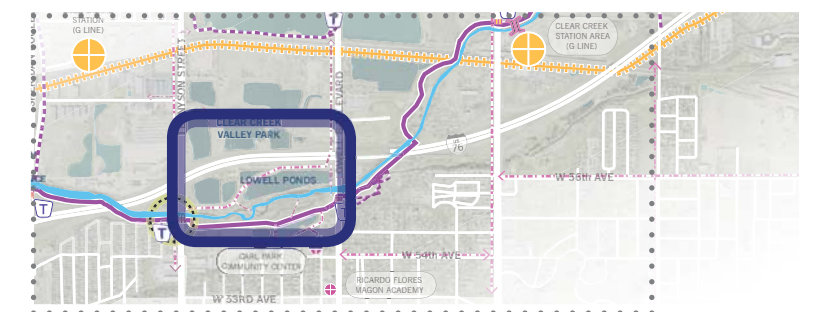


ZONE 1 RECREATION LOWELL PONDS

*WATER-FOCUSED
ECOLOGICAL AREA*

A diverse wetland and aquatic habitat learning park that includes educational signage, formalized pedestrian walks and soft trails* bird-watching areas and stocked fishing ponds. The County has coordinated with Regis University staff to partner on the programming of the county-owned site at 55th and Lowell and student engagement in the land management and maintenance of the ponds and surrounding area.

This site is an opportunity for partnerships between Adams County, Colorado State Division of Parks and Wildlife, Audobon of the Rockies, the Colorado Department of Transportation, Urban Drainage and Flood Control District, Hyland Hills Park and Recreation District and Regis University.

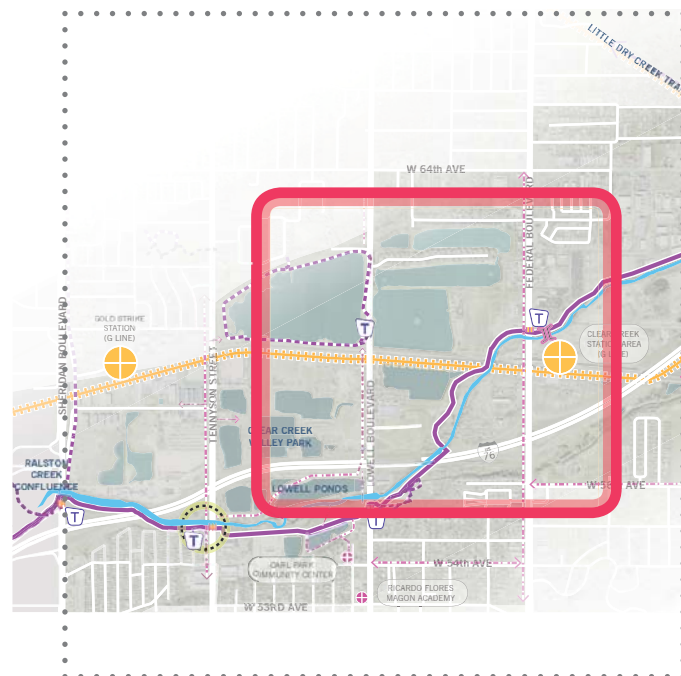


* See page 26 for trail designations

ZONE 1 RECREATION CLEAR CREEK STATION

STATION AREA PARK

Clear Creek Station Area will soon be a transit hub for recreationalists and commuters and a resource for Regis University students. This site provides an opportunity for specialized recreation and low-impact recreational retail such as rental and repair shops, coffee stands, etc. Wetland and floodway buffers areas are currently limited and should be restored.



* See page 26 for trail designations



PAVED CYCLING TRAILS



NATURE-THEMED
CHILDREN'S PLAY AREA



FITNESS EQUIPMENT



LOUNGING AREAS



RESTAURANTS AND RETAIL



PUBLIC ART



SAFE RIVER CROSSING



RAIN OR SHADE SHELTER



EXPANDED WETLAND HABITAT



Added multi-use crossings with iconic public art



Specialized recreation opportunities near 55th and Lowell with safe viewing and event areas



Trailside retail and dining



Nature-themed destination play areas



Potential water recreation opportunities within the Creeks



Specialized bicycle recreation




On-water recreation opportunities exist at Little Dry Creek Lake



Picnic and gathering areas


WATER SPORTS 

FISHING AREAS 

PAVED CYCLING TRAILS 

MOUNTAIN BIKING 

NATURE-THEMED CHILDREN'S PLAY AREA 

LOUNGING AREAS 

RESTAURANTS AND RETAIL 

SAFE RIVER CROSSING 

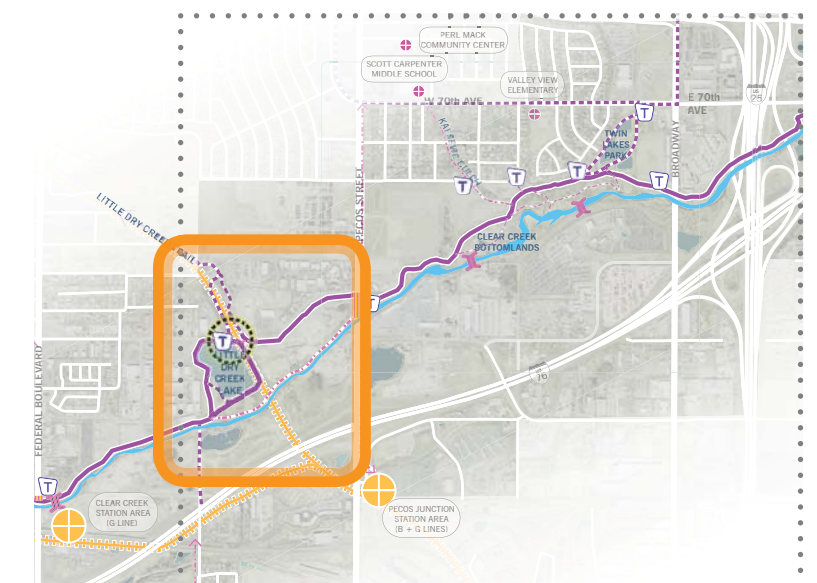
RAIN OR SHADE SHELTER 

OPEN MEADOW 

ZONE 2 RECREATION LITTLE DRY CREEK

REGIONAL OPEN SPACE

The intersection of the Little Dry Creek Trail and Clear Creek connects Jefferson and Adams counties and a number of transit areas nearby. River topography provides an opportunity for future development to incorporate water recreation such as tubing, kayaking and stand-up paddle boarding. Partnerships could be sought with the Burlington Northern Santa Fe Railroad and the Urban Drainage and Flood Control District to low-contact forms of water recreation in Clear Creek.





* See page 26 for trail designations

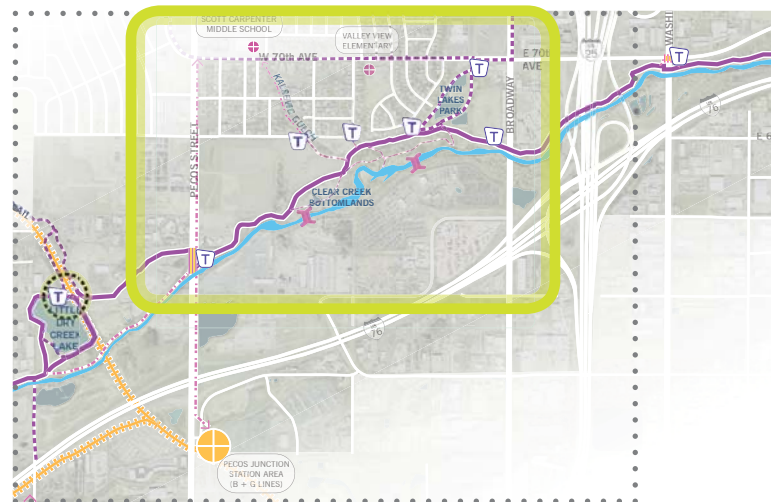
ZONE 2 RECREATION CLEAR CREEK BOTTOMLANDS

HABITAT-FOCUSED
ECOLOGICAL AREA

Twin Lakes Park is a developed park that serves as a gateway to the Clear Creek Bottomlands. The Bottomlands host diverse upland, riparian and aquatic habitats. Educational signage, formalized pedestrian and soft trails*, wildlife viewing areas provide an escape from urban life. With dense housing being built to the west, this area will become a protected “urban wild” with educational programming and places for reflection and low-impact recreation.

-  PAVED CYCLING TRAILS
-  MOUNTAIN BIKING

-  SAFE RIVER CROSSING
-  OPEN MEADOW
-  ANIMAL HABITAT PROTECTION
-  NATURE LEARNING
-  EXPANDED WETLAND HABITAT



* See page 26 for trail designations



Quiet spaces for reflection and observation.



Outdoor learning areas



Informal trails defined by mowing routes



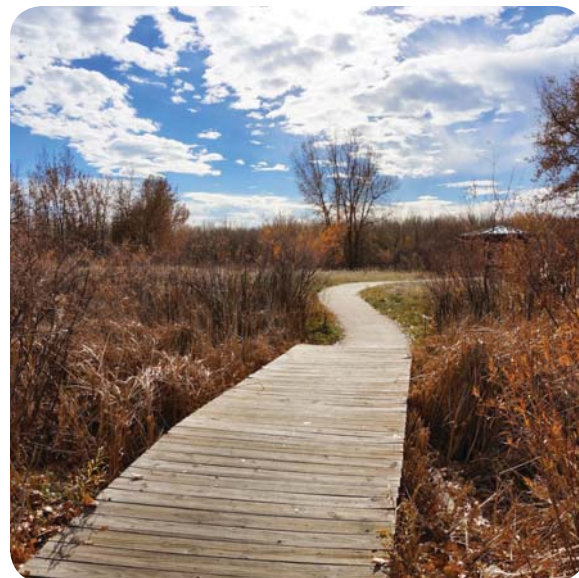
Seasonal wetlands



Educational and interpretive signage



Protected wetland seating areas



Boardwalk walking routes within wetlands minimize impacts on vegetation and small animal movement.



Safe wildlife habitat corridors

PAVED CYCLING TRAILS



PUBLIC ART



SAFE RIVER CROSSING



RAIN OR SHADE SHELTER



NATURE LEARNING



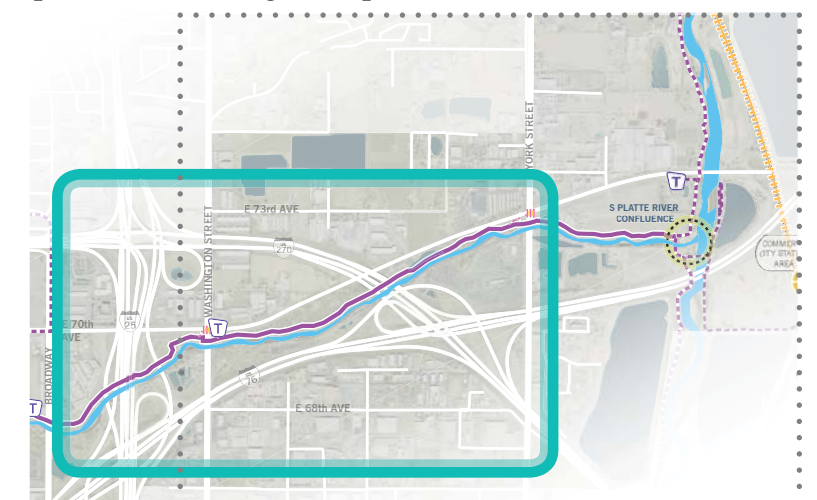
EXPANDED WETLAND HABITAT



ZONE 3 RECREATION CLEAR CREEK WETLANDS

NATURE PRESERVE

At the Clear Creek Wetlands, regulatory wetland habitats have already been identified and surrounding highways, minimal maintenance access and ongoing industrial uses currently threaten the long-term health of the corridor. Soft surface trails* and educational signage guide visitors through a protected area with a restored floodway, enhanced wildlife and wetland habitats. County coordination with CDOT can increase management opportunities while partnerships with advocate groups such as the Nature Conservancy, Audubon of the Rockies and local schools can provide habitat insight and protection.



* See page 26 for trail designations

ZONE 3 RECREATION CLEAR CREEK CONFLUENCE

REGIONAL OPEN SPACE

An iconic destination that merges two regional trail corridors. Future development plans should engage both rivers and provide resources for specialized recreation and events.

The confluence area is difficult to access, with few parking options and significant distances between amenities for pedestrians. Improvements to existing parking area are underway. Access to and through this area should be improved, which could include land acquisition, additional pedestrian bridges, or other improvements. Programming and future development will be largely influenced by improvements to accessibility.

Because two major regional trails converge in this area, there are significant opportunities for activation and to use the pavilions that already exist at Engineer Lake. This is an area that could be a prime spot for festivals, bicycle-focused activities, or water-based activity (subject to favorable water quality).



WATER SPORTS



FISHING AREAS



PAVED CYCLING TRAILS



NATURE-THEMED
CHILDREN'S PLAY AREA



LOUNGING AREAS



PUBLIC ART



SAFE RIVER CROSSING



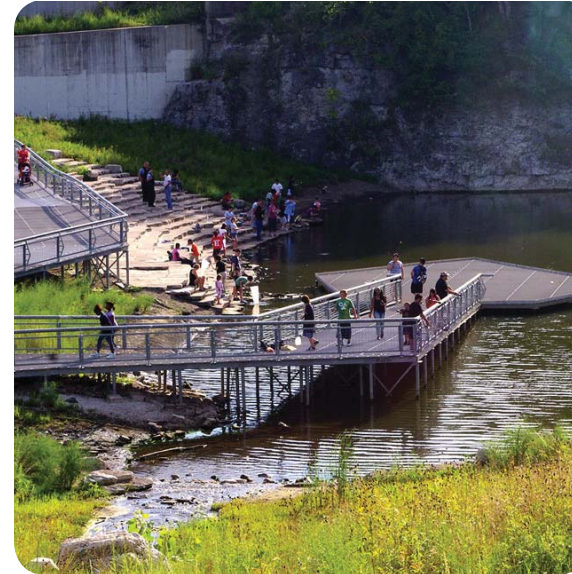
OPEN MEADOW



ANIMAL HABITAT PROTECTION



EXPANDED WETLAND HABITAT



Safe, ADA-accessible water access could be incorporated at Engineer Lake



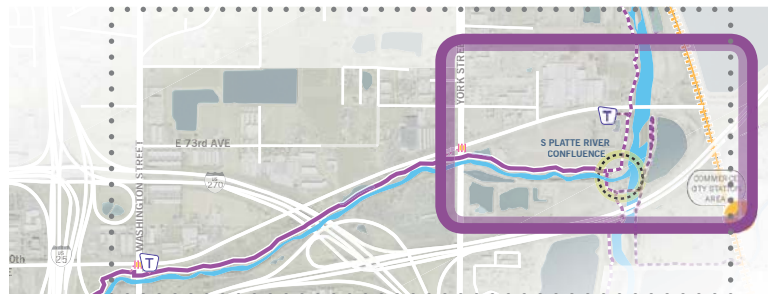
Large outdoor performance area



Increased safe pedestrian crossings



'Beach' / lounging areas with picnic facilities



* See page 26 for trail designations

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6 | PLAN RECOMMENDATIONS: DEVELOPMENT GUIDELINES

The following guidelines have been prepared in cooperation with Adams County staff with the intention of driving future development strategies to ensure the long-term success, health and vitality of the Clear Creek Corridor.

The recommendations are intended to expand upon existing standards established by other relevant regulatory agencies including Adams County, local municipalities and the Urban Drainage and Flood Control District.

Adams County Parks and Open Space envisions Clear Creek as a continuous habitat corridor that extends from the South Platte River to Ralston Creek. Attainment of this vision requires cooperation between public and private development who share the goal of establishing this vibrant system as an economic driver for future development and an amenity for residents, workers and visitors region-wide.

Some of these guidelines address risks and areas of concern observed throughout the site analysis process or presented by Adams County staff, or

otherwise upport the overall health and welfare of the Clear Creek corridor. Other recommendations address how private property interacts with the river in the hope of shifting attention toward Clear Creek as a unifying amenity for future commercial, residential or industrial development. Recommended guidelines should be translated into amendments to the Development Standards and Regulations.

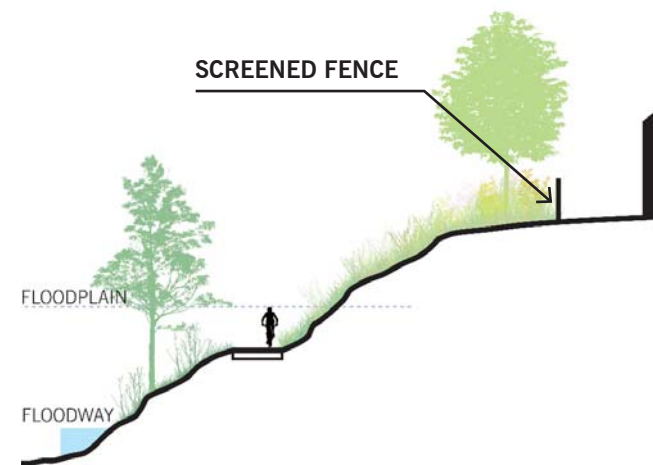
The development guidelines proposed in this section should be incorporated into Adams County's Development Standards and Regulations, policies, and plans. To be incorporated, new regulation language must be crafted and adopted through a public hearing process with the Planning Commission and the Board of County Commissioners.

Ongoing Restoration Efforts

In addition to the best practices and habitat protection methods noted in the following pages, Adams County Parks and Open Space will continue to restore the existing open spaces to provide a visually and physically accessible corridor area with native trees and shrubs to fill the food and nesting needs of terrestrial animals, and support a heanthy aquatic environment to support aquatic habitat food, nesting and migration needs in accordance with accepted best practices.

VEGETATED SCREENING AT FENCED BOUNDARIES

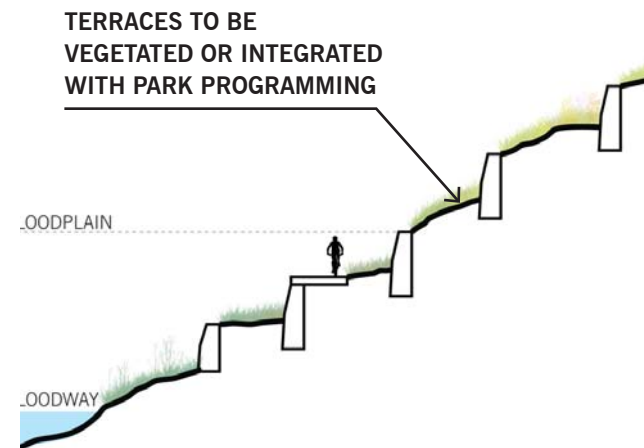
APPLICATIONS: existing parking lots, industrial,
single-family residential



Vegetated screening

TERRACED SLOPES

APPLICATIONS: areas in which <4:1 slope is not possible



Usable terrace

DEVELOPMENT GUIDELINES ENHANCING EXPERIENCE

Vegetated Screening at Fenced Boundaries

Integrate low-maintenance vegetated screening along fencing to soften hard edges. Screen should include diverse canopies of overstory trees, tall shrubs, grasses and wildflowers. These screens must be well-maintained and comprised of locally-adapted plant species.

Fencing should be avoided altogether where possible for mixed-use and commercial developments, creating a second building face along the creek.

Terraced Slopes

Slopes steeper than 4:1 should be terraced, rather than graded to minimize erosion and maximize planted and/or programmable area. These terraces can support water quality planting areas (*see page 47*), occupiable decks or patios, trails or other functional elements, they are easier to maintain and less prone to erosion.

Materials should be aesthetically pleasing and reflect natural materials. In accordance with UDFCD recommendations, gabion walls should not be used for extensive retention, but are acceptable for small terraces and seat walls.

ENHANCING EXPERIENCE

Enhanced Creekside Visibility

Future commercial and retail development should address the river area as an amenity and should not turn its back to the creek. Outdoor spaces should face the creek corridor.

Future commercial development should provide safe, public trail connections through sites from streets to the trail as part of their site development plans.

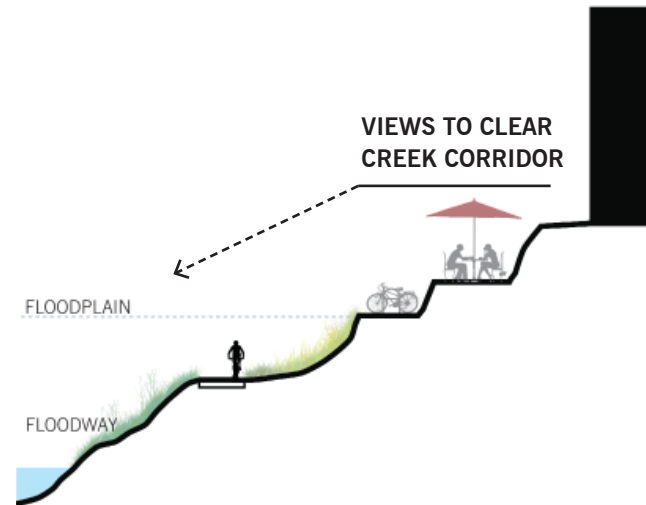
Integrated Open Space Areas with Low Vegetation Buffer

Future multi-family residential, schools, community centers and other public buildings should integrate open space areas with the corridor. This includes private or semi-private play areas, gardens, plazas and patios. These areas can be separated from the corridor if needed but that should be achieved with a vegetated buffer that includes tree canopy and healthy understory shrubs and not a solid fence.

Public, community and multi-family development should also provide safe, public trail connections from streets to the trail.

ENHANCED CREEKSIDE VISIBILITY

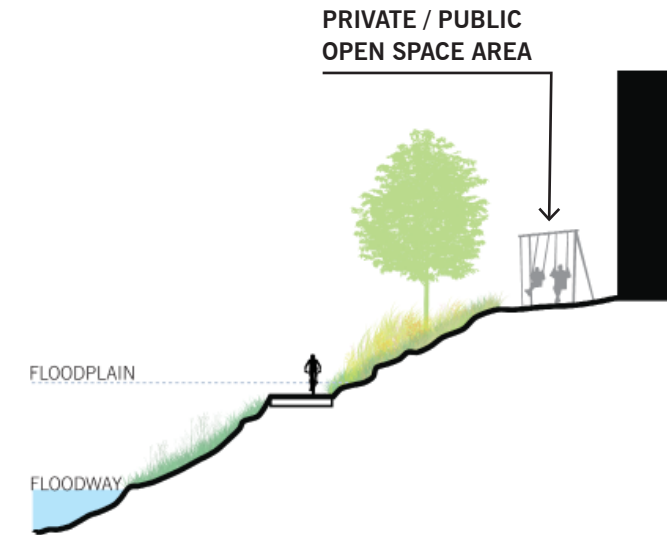
APPLICATIONS: commercial, retail



Outdoor cafe embraces creek views

INTEGRATED OPEN SPACE AREAS WITH LOW VEGETATION BUFFER

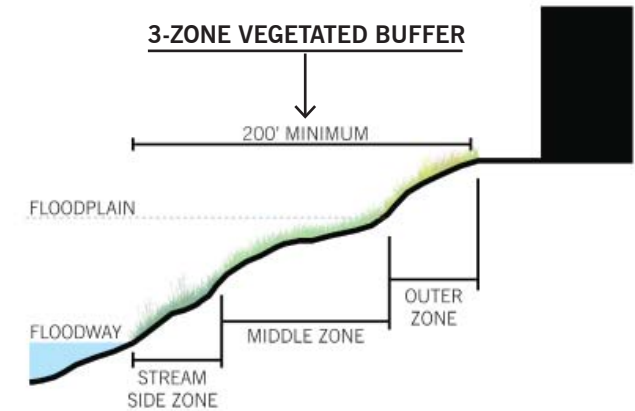
APPLICATIONS: multi-family residential, schools, community centers, other public buildings



A private garden at a multi-family community blurs the boundary between public open space and private development

200' MINIMUM 3-ZONE BUFFER

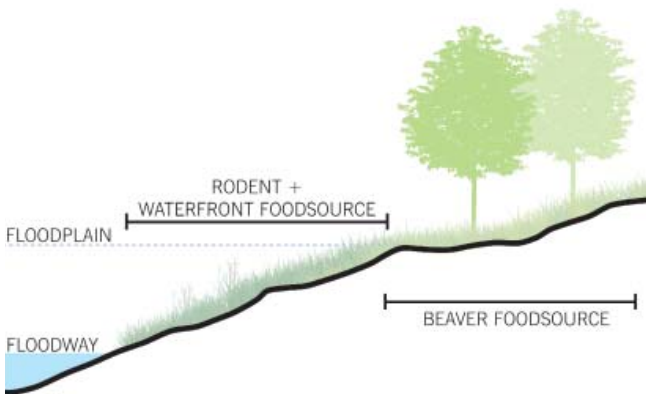
APPLICATIONS: mid and high-impact development, stormwater outfall clusters, ecological areas and nature preserve areas.



Healthy 3-zone vegetated buffer

ANIMAL FOODSOURCE PLANTINGS

APPLICATIONS: ecological areas and nature preserve, other areas as possible.



Clover is a native, safe and popular foodsource for many terrestrial species and most pollinators. It that can be added to many popular grass seed mixes is still traversable for picknicking or open space play

DEVELOPMENT GUIDELINES
EXPANDING HABITATS

200'-Minimum 3-Zone Buffer

In addition to existing development restrictions within floodplain areas, a standard 200' minimum vegetated buffer should be consistently maintained at the floodway edge. This buffer includes three distinct vegetation zones, as designated by the Urban Drainage and Flood Control District. This buffer area applies to all development to ensure safe wildlife movement, a healthy riparian corridor and adequate stormwater quality treatment. Soft trails can traverse this corridor but regional trails should be kept beyond 200' from river edge within 'nature preserve' and 'habitat-based recreation areas'

Animal Foodsource Plantings

Animal foodsource patches support wildlife habitat and encourage mammals (such as insects and pollinators, beavers, small rodents, deer, fox and coyote) and waterfowl to settle or feed safely within designated conservation areas - in "Ecological Areas" (at Lowell Ponds and Clear Creek Bottomlands) and the "Nature Preserve" at the Clear Creek Wetlands area. These plantings include spike sedges, clover species, smartweed, wild rice, wild millet, bulrush, various grasses and safe fruit-producing trees.

EXPANDING HABITATS

Ephemeral Ponding Areas

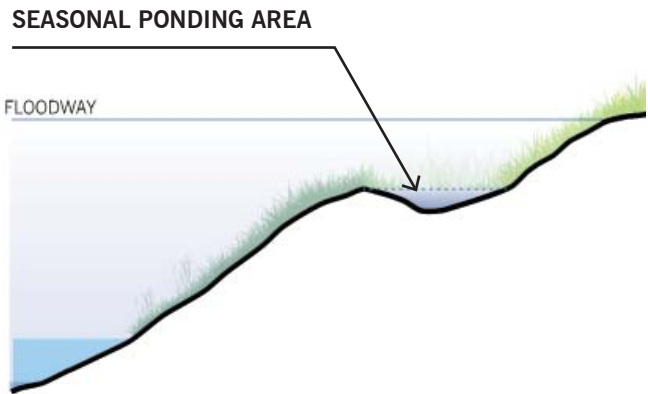
Within “Ecological Areas” (at Lowell Ponds and Clear Creek Bottomlands) and the “Nature Preserve” at the Clear Creek Wetlands area, future restoration efforts should include grading strategies within the floodway that create seasonally inundated habitats that cultivate unique plant and animal growth. These can be integrated into existing seasonal wetland zones with defined inlet and outlet channels. These ephemeral habitats provide significant ecological value and educational opportunities.

Safe Nesting Areas

Land and waterfowl nesting structures should be provided within the floodway and upland areas at Ecological Areas and the Clear Creek Wetlands. These provide nesting space in these areas lacking a developed tree canopy. These must be properly located and sized for the target species, and provide safe protections against predators.

SEASONAL PONDING AREAS

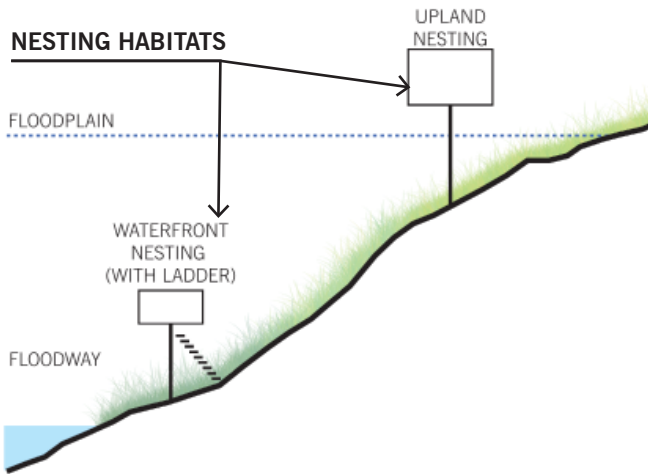
APPLICATIONS: ecological areas and nature preserve, other areas as possible.



Seasonal pond (also called “vernal pool” or “ephemeral pond”)

SAFE NESTING AREAS

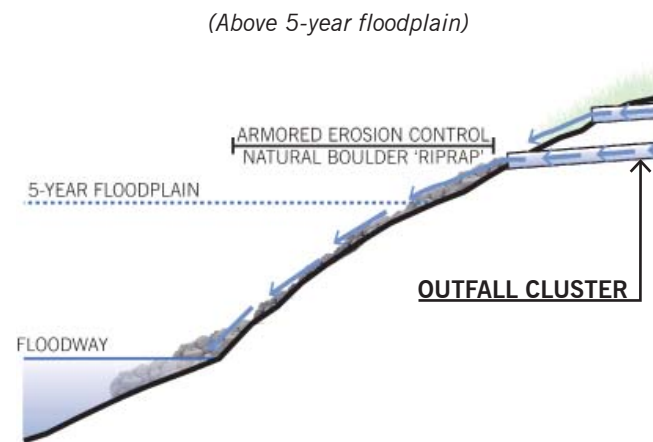
APPLICATIONS: ecological areas and nature preserve, other areas as possible.



Waterfowl nest with metal sleeve to protect against climbing predators

OUTFALL SETBACK

APPLICATIONS: minimum requirement
for future development



See UDFCD Criteria Manual for current details

USDCM: Volume 1 | Management, Hydrology and Hydraulics

USDCM: Volume 2 | Structures, Storage and Recreation

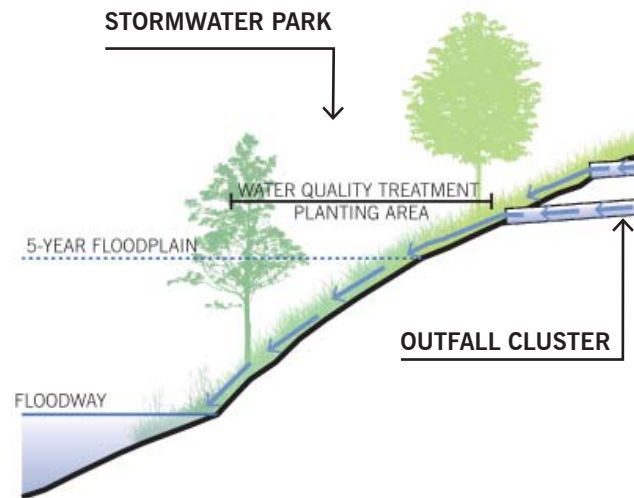
USDCM: Volume 3 | Stormwater Quality



A well-designed stormwater outfall - pulled away from frequent flood zones and easily accessible for maintenance teams

INTEGRATED STORMWATER PARKS

APPLICATIONS: ecological areas and nature preserve,
other areas as possible.

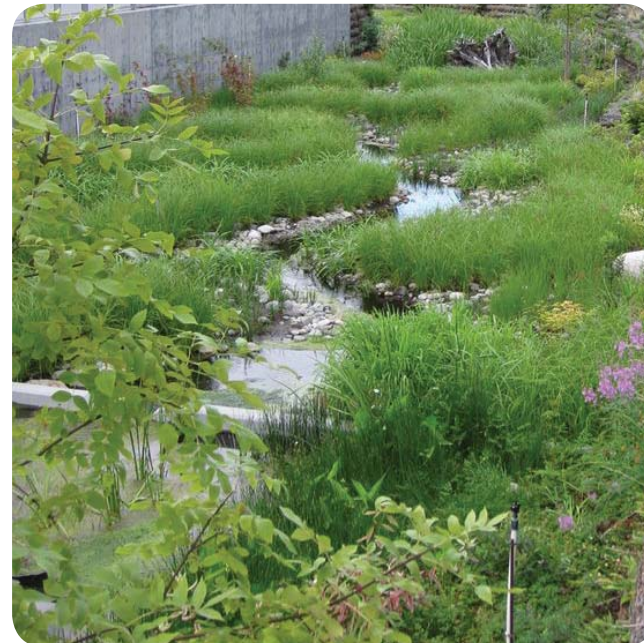


See UDFCD Criteria Manual for current details

USDCM: Volume 1 | Management, Hydrology and Hydraulics

USDCM: Volume 2 | Structures, Storage and Recreation

USDCM: Volume 3 | Stormwater Quality



Stormwater park with lush water quality treatment planting throughout

DEVELOPMENT GUIDELINES INTEGRATING RESILIENT INFRASTRUCTURE

Outfall Setback

All future development should set outfalls outside of the 5-year floodplain.

Integrated Stormwater Parks

Within “Ecological Areas” (at Lowell Ponds and Clear Creek Bottomlands) and the “Nature Preserve” at the Clear Creek Wetlands area, and in other locations wherever possible, outfalls should be clustered and directed into linear stormwater park corridors. Water quality planting areas, well-draining soils and erosion control measures must be taken in these areas to convert outlet zones into open space amenities and improve overall water quality. Regulations for the design, installation and maintenance of these areas are available through the Urban Drainage and Flood Control District.

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7 | NEXT STEPS: THE FUTURE OF CLEAR CREEK

Clear Creek is a major waterway and one of the most heavily used regional trails in Adams County. Improvements suggested by the community will enhance the trail experience, natural systems, and recreational opportunities throughout the corridor. The community’s vision will create a vibrant, interesting experience that will be a benefit to all.

With projects ranging in size, location, and impact, prioritization of projects is very important. An implementation matrix was created to bring clarity to the implementation process. The matrix includes major components of the recommendations in Chapters 3, 4, and 5 of this plan. Projects are given a priority level of ‘low’, ‘medium’, or ‘high’, based on input received in public meetings and operations priorities of the Parks and Open Space Department. Projects that are already in progress are given a priority level of ‘high’ since effort and funding are already committed. Projects are also given an order of magnitude cost, which is intended to be a general idea of how much a project may cost to implement. Potential funding sources for each project are listed. These are not meant to be an exhaustive list; rather, agencies listed are likely potential contributors to the project. Next steps for each project are listed as a jumping off point toward implementation.

STRATEGIC PARTNERSHIPS AND IMPLEMENTATION

In addition to the Clear Creek trail, Adams County operates and maintains the South Platte River trail, portions of the Little Dry Creek and Niver Canal trails, six parks including the Regional Park and Fairgrounds, and over seventeen hundred (1,700) acres of open space. A large portion of funding for operations, maintenance, and capital projects at the Regional Park and Fairgrounds is obtained from Adams County’s general fund (property tax). Adams County Parks and Open Space’s primary funding sources for capital improvements are the Conservation Trust Fund (Colorado Lottery proceeds) and the Adams County Open Space Sales Tax. In 2016, Adams County received \$1.8 million from the Conservation Trust Fund and the direct shareback of the Adams County Open Space Sales Tax. Approximately thirty percent of that money is budgeted for maintenance each year, leaving \$1.25 million to be spent on capital projects throughout the open space, parks, and trails system.

Throughout the Clear Creek Corridor planning process, the community outlined a wide variety of improvements to the current trail infrastructure and recreational opportunities along Clear Creek. The improvements identified by the community fit into one of three categories: basic needs, circulation and access, or recreation and programming. The estimated cost to implement the entire plan is \$25,793,500.

With limited capital funding available, implementation of the Clear Creek Corridor Plan will heavily rely on grants and partnerships.

Adams County has a successful history in leveraging available funds with grants from Great Outdoors Colorado (Colorado Lottery proceeds), the Adams County Open Space Sales Tax grant program, the Fishing is Fun grant program, and the State Trails grant program. The Parks and Open Space Department also works with the Urban Drainage and Flood Control District to direct funding toward important projects that benefit flood control and have ancillary benefits for recreation. In addition to these programs, Adams County should seek out other funding for water quality, habitat, and recreational improvements to better leverage available funding.

A new partner, the Clear Creek Watershed Foundation, has recently worked with Adams County to improve the habitat along Clear Creek and obtain better information on water quality throughout the corridor. The Clear Creek Watershed Foundation seeks and distributes funding to maintain, preserve, restore, and improve the ecological, aesthetic, and recreational conditions of the watershed. The Clear Creek Watershed Foundation could secure third party funding for a wide variety of projects in the corridor. While they are not a direct funding partner, the Foundation is a key partner in the implementation of the Clear Creek Corridor Plan because of their ability to fundraise, project manage, and provide technical expertise.

Adams County has discussed potential partnerships with the City of Arvada, Hyland Hills Park and Recreation District, and the Burlington Northern Santa Fe Railroad. The county will also seek assistance from nearby property owners, developers, and businesses during the implementation process. These groups may be able to provide shared space for trailhead parking, trail connections, appropriate transitions between public and private lands, and other contributions that further the purposes in the plan.

**RECOMMENDED FUTURE
ANALYSIS EFFORTS**

Given the significant interest and need for habitat restoration and the need for a healthy river corridor in the face of future development, additional analysis is recommended to establish detailed, comprehensive standards for stormwater management. This analysis is critical to the health and vitality of the Clear Creek Corridor but was not included as part of this planning effort scope of work. The following recommended analysis should be pursued as part of future development planning efforts, in coordination with the Urban Drainage and Flood Control District following upcoming updates to the Clear Creek Corridor Urban Drainage Master Plan.

Infrastructure Inventory

Create an inventory of infrastructure projects that are needed throughout the corridor. This inventory should build upon the Urban Drainage and Flood Control District’s master plans, stormwater improvement plans and road improvement projects that incorporate sidewalks near the trail or bridge replacements over Clear Creek. Identify criteria to use to rank the projects and create a prioritized list.

***Comprehensive
Maintenance Database***

Complete a GIS analysis of existing data to create a list of maintenance issues. Use characteristics such as vegetated cover, soils, erosion, steep slopes, discharges, hard turns in the creek, silt under bridges, and scouring to identify maintenance issues. Cross check this list with county maintenance teams to ensure an accurate representation of actual conditions.

Establish a process involving Parks and Open Space, Stormwater, Floodplain Control, and Current or Long Range Planning staff to prioritize and address maintenance issues on a yearly basis.

Outfall Analysis

Look at size, flow, location and erosion associated with all of the outfalls along the corridor. Establish a process with Adams County Parks and Open Space and Adams County Stormwater staff to prioritize outfalls for either modification or replacement.



APPENDIX

CLEAR CREEK CORRIDOR
IMPLEMENTATION STRATEGY

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100K	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
BASIC NEEDS								\$ 2,065,500.00		
Lighting								\$ 125,000.00		
Underpass lighting improvements			X	X				\$ 5,000.00	Road and Bridge Fund, CDOT, Open Space Sales Tax	Contact Public Works and CDOT to request improvements to or repair of lighting under bridges.
Enhanced safety lighting on trail near Federal Boulevard Station and Regis University connection		X			X			\$ 120,000.00	Open Space Sales Tax, Great Outdoors Colorado, Regis University	Determine whether power is accessible. Research solar lighting if no power available.
Trailhead Resources								\$ 1,445,500.00		
Bike share stations at Regional Trail Hubs (3) and Transit Stations (4) or or stationless systems			X	X				\$ 40,000.00	Area hospitals, Open Space Sales Tax (for initial startup costs), Great Outdoors Colorado	Convene cities and counties in north Denver to discuss implementation of a common system; Understand costs and pros/cons associated with each operator; Identify funding sources (if needed)
Expanded / increased parking areas at trailheads (when partnership opportunities arise)		X				X		\$ 1,000,000.00	CDOT, Open Space Sales Tax	Monitor trailheads during peak use to identify capacity issues; Identify existing parking areas that could be expanded; Identify businesses with parking areas adjacent to the trail that could be targeted for shared use; Contact business owners.
Restroom facilities at parking areas (7 total - 2 existing)		X			X			\$ 150,000.00	Open Space Sales Tax, Conservation Trust Fund	Identify potential locations for portolets; Contract with portolet company for additional facilities.
Safety lighting at trailheads (12)			X		X			\$ 240,000.00	Open Space Sales Tax; Conservation Trust Fund	Research whether electrical service exists at trailhead locations; Research solar lighting; Identify best lighting choice for trailhead locations; Purchase and install lighting fixtures.
Bike repair stations every mile (7)		X		X				\$ 10,500.00	Open Space Sales Tax, Conservation Trust Fund	Research bike repair station manufacturers; Identify potential locations for bike repair stations; Determine design best suited to our system; Order and install stations.
Wayfinding signage at trailheads (12)			X	X				\$ 5,000.00	Open Space Sales Tax, Conservation Trust Fund	Design signs; Purchase and install signs
General Signage								\$ 215,000.00		
Improved wayfinding at known areas of concern (2 locations)			X							
Little Dry Creek			X	X				\$ 2,500.00	Open Space Sales Tax, Conservation Trust Fund	Create inventory of decision points in need of signage; Design signs; Purchase and install signs
S Platte Confluence			X	X				\$ 2,500.00	Open Space Sales Tax, Conservation Trust Fund	Create inventory of decision points in need of signage; Design signs; Purchase and install signs
Improved regional-trail signage, integrated signage, and wayfinding within trail and at other locations to direct users toward Clear Creek (Peaks to Plains, US-36, RTD, Walk-ride Colorado, S Platte River Trail, Walk-Ride Colorado)			X		X			\$ 200,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Create RFP for sign design; Advertise and hire contractor to design signage program; Create signage program; Create inventory of decision points and sign locations; Purchase and install signs.
Neighborhood wayfinding signage to CC Trail		X		X				\$ 10,000.00	Open Space Sales Tax, Conservation Trust Fund	Create inventory of key sign locations; Design signs; Purchase and install signs

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100K	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
Increased Security Presence								\$ 220,000.00		
Dedicated patrol in partnership with Adams County Sheriff's office		X			X			\$ 200,000.00	Open Space Sales Tax, Conservation Trust Fund, Sheriff's Office	Begin discussions between Parks and Open Space and Sheriff's Office; Determine potential risks and benefits and additional resources that may be needed; Advocate for additional resources
Volunteer -based patrol program			X	X				\$ 20,000.00	Open Space Sales Tax, Conservation Trust Fund, Sheriff's Office	Begin discussions between Parks and Open Space and Sheriff's Office; Determine role each agency would play; Determine potential roles of volunteers in patrolling trails
Stewardship								\$ 60,000.00		
Education program (s)		X		X				\$ 40,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Assess corridor for educational opportunitites (wetlands, management topics, wildlife, water resources, trail etiquette, etc.); Choose topics to address with interpretive signage; Hire professionals (as needed) to create content for signage; Design signs; Manufacture and install signs; Choose topics to address with staff and/or volunteers as programming opportunities; Design programming schedule; Train volunteers; Advertise; Hold educational program
Maintenance / volunteer program (s)		X		X				\$ 20,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Identify maintenance projects suitable for volunteers; Shift full-time maintenance staff schedules or designate/hire full time maintenance staff to lead volunteer projects; Schedule volunteer projects; Recruit volunteers; Purchase supplies; Execute volunteer projects

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100K	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
CIRCULATION AND ACCESS								\$ 11,860,000.00		
Sheridan Boulevard								\$ -		
Signage improvements	X							See above	Open Space Sales Tax, Conservation Trust Fund	Create inventory of decision points in need of signage; Design signs; Purchase and install signs
Tennyson Street								\$ 150,000.00		
HAWK crossing			X		X			\$ 150,000.00	Road and Bridge Fund, Open Space Sales Tax, Conservation Trust Fund	Discuss signal choices with traffic engineers and narrow to preferred solution; Identify funding; Bid and install signal for safe pedestrian/bicycle crossing
56th Ave - Federal Boulevard to Pecos Street								\$ 10,000.00		
Dedicated on-street bicycle lane		X		X				\$ 10,000.00	Road and Bridge Fund, Open Space Sales Tax	Determine whether current pavement width can accommodate bike lanes; If yes, stripe accordingly; If no, include widening in Transportation Plan updates for future prioritization
Lowell Boulevard								\$ 690,000.00		
On-street trail connection to CC Valley Park and Jim Baker Reservoir			X		X			\$ 100,000.00	Road and Bridge Fund, Open Space Sales Tax	IN PROGRESS: Public Works is acquiring right-of-way for improvements to Lowell between 62nd Ave. and Clear Creek. Sidewalks will be installed on both sides of the road.
Off-street trail connection to Carl Park Community Center			X			X		\$ 590,000.00	Open Space Sales Tax, Conservation Trust Fund, Hyland Hills Park and Recreation District, Great Outdoors Colorado	IN PROGRESS. Work with Hyland Hills to create design and coordinate staff; Construct trail connection
Federal Boulevard								\$ 1,500,000.00		
Pedestrian bridge east of Federal (direct connection to station)			X			X		\$ 1,000,000.00	Regional Transportation District, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Regis University	Advertise for engineering consultant to design bridge, potential design partnership with Regis University
At-grade trail access on the east side of Federal		X			X			\$ 500,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Determine if additional land is needed to make this connection
Little Dry Creek Lake								\$ 2,105,000.00		
Parking area expansion	X				X			\$ 350,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Design expanded parking lot
Wayfinding improvements			X	X				\$ 5,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Create inventory of decision points in need of signage; Design signs; Purchase and install signs
Future trail realignment along creek		X				X		\$ 1,000,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Urban Drainage and Flood Control, Stormwater Fee	Discuss trail alignment along creek with property owner
Alternative to future trail realignment along creek: Construct a trail alignment under the BNSF and along the east side of the tracks, up to 64th Avenue.		X				X		\$ 750,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, BNSF, Urban Drainage and Flood Control District	IN PROGRESS: Discuss trail alignment along creek with railroad and adjacent property owner

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100k	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
Pecos Street								\$ 1,805,000.00		
Underpass improvements (to be considered if road bridge is replaced)		X			X			\$ 500,000.00	Road and Bridge Fund, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Understand anticipated timing for bridge replacement; Advocate for redesign with additional clearance to allow for trail to be elevated in the future
Alternative to Underpass improvements: Design/construct wall to prevent sediment deposition onto trail (also reduces flooding closures)		X				X		\$ 1,000,000.00	Open Space Sales Tax, Conservation Trust Fund	Discuss wall with Urban Drainage and Flood Control as well as County floodplain manager and Public Works Department.
Dedicated multi-use path from Pecos Station to Clear Creek Trail			X		X			\$ 300,000.00	Road and Bridge Fund, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Discuss options with Public Works Department
Dedicated wayfinding signage from Pecos Station to Clear Creek Trail			X	X				\$ 5,000.00	Open Space Sales Tax, Conservation Trust Fund	Design, manufacture, and install signage prior to opening multi-use path.
Clear Creek Bottom Lands								\$ 1,400,000.00		
Kalesevic Gulch trail connection to Scott Carpenter Middle School			X			X		\$ 1,000,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Urban Drainage and Flood Control, Stormwater Fee	Determine feasibility in terms of right-of-way existing and grade; Talk with neighboring property owners
Additional soft-surface walking trails within Bottomlands area		X			X			\$ 200,000.00	Open Space Sales Tax, Great Outdoors Colorado	Design trail connections
2 Creek crossings to extend soft-surface trails to south side of river in trail loop	X				X			\$ 200,000.00	Open Space Sales Tax, Great Outdoors Colorado	Design creek crossings
Washington Street								\$ 1,950,000.00		
Emergency services access (at grade trail connections)			X				X	\$ 1,500,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Design trail connections
Trailhead parking lot		X			X			\$ 300,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Discuss creation of a parking lot with Colorado Department of Transportation (would be in right-of-way)
Trail connection to planned detached walk			X		X			\$ 150,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Design trail connections
York Street								\$ 1,900,000.00		
Trail access (already planned / underway)			X			X		\$ 900,000.00	Road and Bridge Fund, Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Acquire right-of-way; finish design
At grade trail connections		X				X		\$ 1,000,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Design trail connections
South Platte River Confluence								\$ 350,000.00		
Parking improvements (already planned / underway)			X		X			\$ 325,000.00	Colorado Department of Transportation, Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Execute funding agreement with CDOT, finish design
Safety lighting at Confluence area and parking		X		X				\$ 20,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund	Finish design
Enhanced wayfinding signage			X	X				\$ 5,000.00	Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado	Create inventory of decision points in need of signage; Design signs; Purchase and install signs

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100K	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
RECREATION & PROGRAMMING								\$ 18,435,000.00		
Ralston Creek Confluence Regional Open Space								\$ 410,000.00	City of Arvada, Hyland Hills Park and Recreation District, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, Urban Drainage and Flood Control, U.S. Army Corps of Engineers	Identify partners and funding opportunities; Begin discussions on overall improvements
Public art	X				X			\$ 150,000.00		
Rain or shade shelter / picnic areas		X		X				\$ 50,000.00		
Safe river access			X		X			\$ 150,000.00		
Informational signage			X	X				\$ 10,000.00		
Park planting improvements		X		X				\$ 50,000.00		
Lowell Ponds Water-focused Ecological Area								\$ 1,990,000.00	Hyland Hills Park and Recreation District, Regis University, Colorado Department of Transportation, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, Urban Drainage and Flood Control, Colorado Water Conservation Board, Fishing is Fun, Trout Unlimited, U.S. Army Corps of Engineers	IN PROGRESS: Discuss potential operations shift from CPW to Adams County/Hyland Hills with leadership of each organization
Fishing Improvements (piers, habitat, etc.)	X				X			\$ 200,000.00		
Rain or Shade Shelter	X			X				\$ 50,000.00		
Animal Habitat Improvements			X		X			\$ 125,000.00		
Educational Signage		X		X				\$ 15,000.00		
Paved and soft trails		X			X			\$ 200,000.00		
Wildlife viewing areas		X			X			\$ 100,000.00		
Park planting improvements (removal of noxious weeds, limbing up vegetation, adding desired species)		X			X			\$ 400,000.00		
Improve/expand parking lot		X			X			\$ 250,000.00		
Add pedestrian bridges over Clear Creek for more direct access from parking lot		X			X			\$ 500,000.00		
Facility Improvements (fencing, maintenance building, access, general cleanup, etc.)			X		X			\$ 150,000.00		
Clear Creek Station Area Park (Gateway Plaza and surrounding area)								\$ 905,000.00	Regional Transportation District, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, U.S. Army Corps of Engineers	For Gateway Plaza: Advertise for construction contractor; For other enhancements: Identify partners and scope of work.
Children's Play Area		X			X			\$ 120,000.00		
Musical Play		X		X				\$ 40,000.00		
Plaza, Seating Areas, and Shade		X		X				\$ 82,000.00		
Restaurants and Retail		X						Private Investment		
Public Art	X				X			\$ 100,000.00		
Safe River Crossing at Federal			X					See pedestrian bridge above		
Rain or Shade Shelter	X			X				\$ 90,000.00		
Expanded wetland Habitat			X		X			\$ 100,000.00		
Regrading for access and program improvements			X		X			\$ 100,000.00		
Park planting improvements		X			X			\$ 100,000.00		
Lighting			X		X			\$ 160,000.00		
Soft trails	X			X				\$ 13,000.00		

RECOMMENDATIONS	PRIORITY LEVEL			ORDER OF MAGNITUDE OF COST					POTENTIAL FUNDING PARTNERS	NEXT STEPS
	LOW	MED	HIGH	UNDER \$100K	\$100k-\$500k	\$500k-\$1M	Over \$1M	Total (if known)		
Clear Creek Station Area Park (Gateway Plaza and surrounding area)								\$ 905,000.00	Regional Transportation District, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, U.S. Army Corps of Engineers	For Gateway Plaza: Advertise for construction contractor; For other enhancements: Identify partners and scope of work.
Children's Play Area		X			X			\$ 120,000.00		
Musical Play		X		X				\$ 40,000.00		
Plaza, Seating Areas, and Shade		X		X				\$ 82,000.00		
Restaurants and Retail		X						Private Investment		
Public Art	X				X			\$ 100,000.00		
Safe River Crossing at Federal			X					See pedestrian bridge above		
Rain or Shade Shelter	X			X				\$ 90,000.00		
Expanded wetland Habitat			X		X			\$ 100,000.00		
Regrading for access and program improvements			X		X			\$ 100,000.00		
Park planting improvements		X			X			\$ 100,000.00		
Lighting			X		X			\$ 160,000.00		
Soft trails	X			X				\$ 13,000.00		
Little Dry Creek Regional Open Space								\$ 5,295,000.00	Burlington Northern Santa Fe Railroad, Urban Drainage and Flood Control, Adams County Stormwater Fee, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, Fishing is Fun, Trout Unlimited, U.S. Army Corps of Engineers	Identify funding; Create construction documents
Fishing Area	X				X			\$ 100,000.00		
Nature-themed childrens play area		X			X			\$ 300,000.00		
Lounging areas		X		X				\$ 50,000.00		
Restaurants and Retail	X							Private Investment		
Rain or shade shelter			X	X				\$ 25,000.00		
Open meadow Habitat			X	X				\$ 20,000.00		
Regrading for access and program improvements	X				X			\$ 500,000.00		
Park planting improvements		X			X			\$ 300,000.00		
Safe river access and in-water recreation			X				X	\$ 4,000,000.00		
Clear Creek Bottomlands Habitat Focused Ecological Area								\$ 1,395,000.00	Colorado Water Conservation Board, Open Space Sales Tax, Conservation Trust Fund, Great Outdoors Colorado, Clear Creek Watershed Foundation, Fishing is Fun, Stormwater Fee, U.S. Army Corps of Engineers	Identify partners and funding opportunities; Hire environmental consultant to inventory existing habitats and make recommendations on enhancements
Soft Trails Loop			X					See above		
Safe River Crossing (2)	X							See above		
Open Meadow Habitat		X		X				\$ 40,000.00		
Animal Habitat Protection			X	X				\$ 50,000.00		
Outdoor Classroom		X		X				\$ 30,000.00		
Expanded Wetland Habitat			X		X			\$ 125,000.00		
Wildlife Viewing Areas	X				X			\$ 100,000.00		
Stormwater park habitat		X			X			\$ 300,000.00		
Kalsevic Gulch integration			X		X			\$ 300,000.00		
Regrading for access and program improvements		X			X			\$ 400,000.00		
Enhanced planting improvements		X		X				\$ 50,000.00		

Clear Creek Wetlands Nature Preserve								\$ 500,000.00	Colorado Department of Transportation, Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund, Clear Creek Watershed Foundation, U.S. Army Corps of Engineers	Discuss opportunities to enhance the experience with CDOT
Public Art	X				X			\$ 150,000.00		
Educational signage		X		X				\$ 50,000.00		
Expanded wetland Habitat			X		X			\$ 200,000.00		
Enhanced planting improvements			X		X			\$ 100,000.00		
Clear Creek Confluence Regional Open Space								\$ 7,940,000.00	Open Space Sales Tax, Great Outdoors Colorado, Conservation Trust Fund, Clear Creek Watershed Foundation, Fishing is Fun, Trout Unlimited, U.S. Army Corps of Engineers	Complete outreach with users and neighbors to solidify the vision for this space; Identify funding and implementation partners
Water sports			X				X	\$ 4,000,000.00		
Fishing Areas		X			X			\$ 500,000.00		
Nature-themed children's play area		X			X			\$ 300,000.00		
Amphitheater		X			X			\$ 150,000.00		
Lounging Areas			X	X				\$ 30,000.00		
Public art	X				X			\$ 150,000.00		
Open Meadow Habitat			X	X				\$ 40,000.00		
Animal Habitat Protection		X		X				\$ 50,000.00		
Expanded Wetland Habitat		X			X			\$ 200,000.00		
Regrading for access and program improvements	X				X			\$ 300,000.00		
Additional parking	X				X			\$ 500,000.00		
Shade structures/seating areas			X		X			\$ 120,000.00		
Land acquisition (optional)		X					X	\$ 1,500,000.00		
Park planting improvements			X		X			\$ 100,000.00		

ESTIMATED TOTAL COST FOR ALL RECOMMENDATIONS

\$32,360,500

CLEAR CREEK WATER QUALITY REPORT

PREPARED BY CLEAR
CREEK WATERSHED
FOUNDATION,
APRIL 2017

This exhibit was prepared in response to public questions about overall water quality and concerns about health and safety for future water-based programming. The exhibit was included during Phase 2 and Phase 3 outreach events and illustrated a potential opportunity to allow water activities in the future. Future study and continuous monitoring would be necessary to determine whether the stream is healthy enough to encourage in-water recreation.

The data represented by the April 2017 report was not focused on meeting a state requirement or legal process. It was meant to be informative to foster a general understanding of the water quality in Clear Creek. Additional data was taken from Colorado Department of Public Health and Environment and Environmental Protection Agency reports, which track current uses, attainment status, and impairments of Clear Creek and other stream segments. The Adams County reach of

Clear Creek is identified as COSPCL15 or COSPCL15_A. According to these sources, the water in this reach of Clear Creek is not currently suitable for aquatic life or recreation due to impairments caused by ammonia, sediment, temperatures, and E. coli. As this master plan was not intended to gather or analyze water quality data, the plan relies on the above mentioned data to make recommendations on infrastructure and recreation improvements along the corridor.

Clear Creek Water Quality

Prepared by Clear Creek Watershed Foundation, April 2017



OVERVIEW

The Clear Creek watershed is a 526-square mile drainage basin located in central Colorado that has benefitted from long-term water-quality monitoring and stream flow gaging. This presentation focuses upon the lower part of this watershed and provides a comparison of stream quality to applicable water-quality standards and beneficial-use criteria. This water quality characterization relied upon the use of several databases (see Acknowledgements). Nearly 22,000 analytical results for over 60 water quality parameters at seven different sampling sites, were reviewed and evaluated during the preparation of this presentation. Monitoring sites, including gages, are shown on the map.

Generally, water quality is quite good in Clear Creek from Golden to the South Platte River. However, as in most urban waters, *E. coli* levels are typically elevated, indicating the potential presence of pathogens in the water column (Figure 2). Recreational users should avoid ingesting even small quantities of untreated Clear Creek water and wash their hands after being in the stream. Also, both **Total Nitrogen** and **Total Phosphorus** are elevated in Lower Clear Creek, as discussed below in Figures 5 and 6. Despite extensive mining-related impacts in the mountainous areas of the Clear Creek watershed, toxic heavy metals are not a significant problem in Lower Clear Creek, although **Iron** and **Manganese** are somewhat elevated as shown below in Figure 10. While Clear Creek is in compliance with **daily maximum temperature** standards, there are presently insufficient data to determine compliance with **maximum weekly average temperature** standards. Also, there is a paucity of data for **organic chemicals**, which is important given current industrial land uses and past disposal practices in the lower Clear Creek corridor.



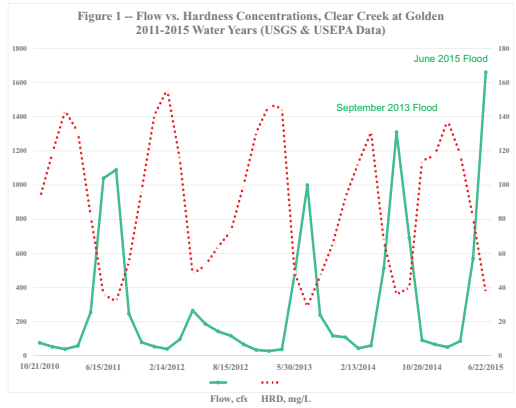
Water Quality Standards and Beneficial Uses

Water quality standards are established to protect the physical, chemical and biological integrity of waters throughout each state and across the nation. There are, in fact, hundreds of numerical standards to consider, when conducting water quality assessments.

Beneficial Uses	Water Quality Standards	Figure references
Water Supply	Total Phosphorus	Figure 7
	Total Nitrogen	Figure 5
	Nitrate & Nitrite	Figure 6
	Manganese & Iron	Figure 8
Aquatic Life	Dissolved Oxygen	Figure 4
	Zinc & Copper	Figure 9
	Hardness & Flow	Figure 1
Recreation	E. Coli Bacteria	Figure 2
	pH	Figure 3

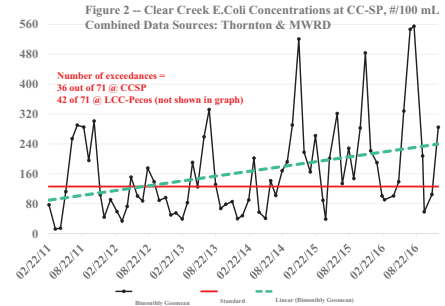
Hardness and Flow

Hardness is not toxic. As the Hardness increases, the toxicity of most metals decreases. Hardness concentrations throughout the watershed vary seasonally with wintertime hardness values about twice those of summertime. Hardness values are low when stream flow is high. Meanwhile, flow in sufficient amounts is the most critical habitat element for fish and water-dependent wildlife.



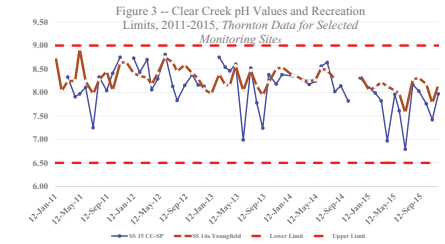
Escherichia coli

Escherichia coli bacteria is the *indicator species* for the presence of disease causing organisms in the water. Just above its confluence with the South Platte River and upstream, near Pecos St., E. coli levels exceed the standard.



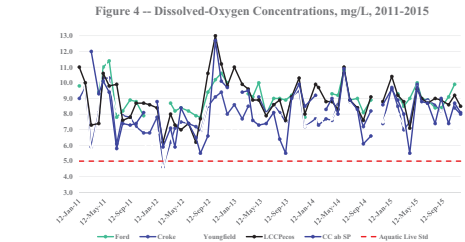
pH

pH is an key water-quality variable controlling trace-metals solubility. Waters that are too acidic, or alkaline, damage sensitive tissues (eyes, skin) impacting recreational water uses (e.g. swimming).



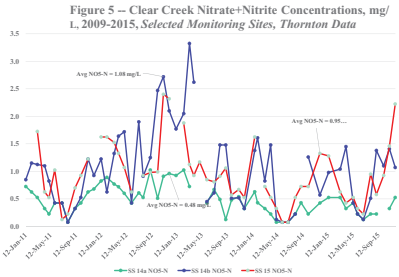
Dissolved Oxygen

Many species of aquatic organisms are exquisitely sensitive to low dissolved oxygen concentrations. The D.O. standard of 5 mg/L is generally met in Clear Creek.



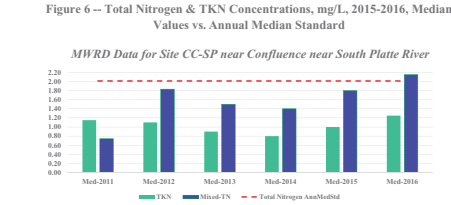
Nitrate-Nitrite

Nitrogen as Nitrate, or Nitrite, in drinking water can be harmful, especially to developing fetuses. The Primary Drinking Water standard is 10 mg/L. Fortunately, Clear Creek is well below that standard.



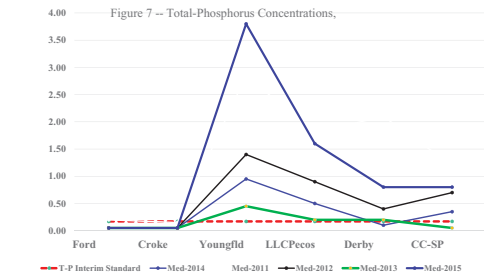
Total Nitrogen

Excessive Total Nitrogen can promote harmful algal blooms, including toxic strains of blue green algae. Current levels at CC-SP are approaching the interim standard for TN.



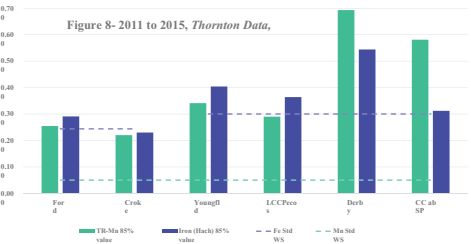
Total Phosphorus

Total phosphorus is a nutrient that can cause eutrophication and harmful algal blooms, impacting water supplies with taste and odor problems and harming water sport enthusiasts with toxicity from certain types of algae. T-P annual median values in lower Clear Creek often exceed the interim standard of 0.17 mg/L



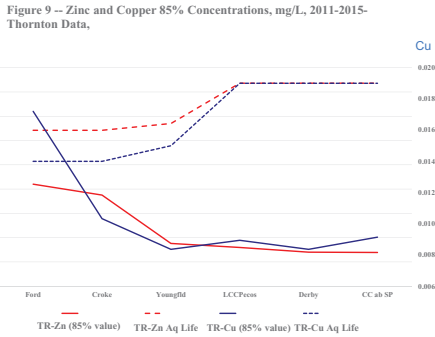
Iron and Manganese

Niether Manganese or Iron is particularly toxic to fish, or human health, but if untreated, they can cause aesthetic problems in water supplies (e.g., staining in plumbing fixtures and clean laundry).



Copper and Zinc

With the exception of copper at Ford Street in Golden, the concentration values for Copper and Zinc- two of the most common toxic metals found in Colorado streams- do not exceed the standards.

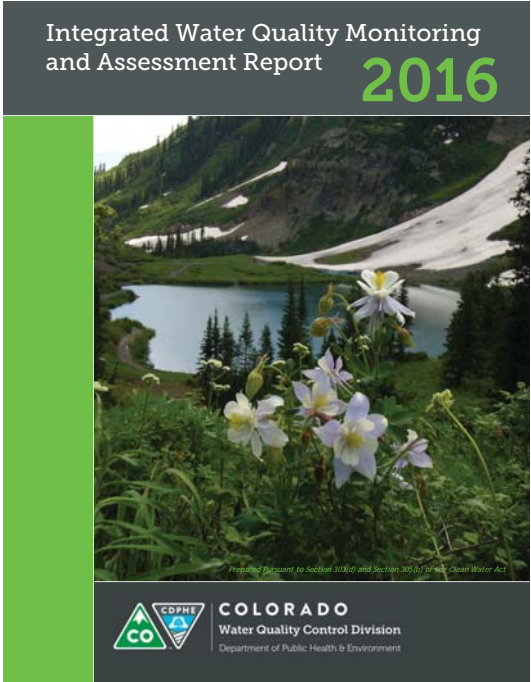


Acknowledgements

This water-quality assessment was prepared by Dr. T.D. Steele, TDS Consulting, and J. David Holm, CCWF Executive Director, with GIS support by Diane Kielty, CCWF. Streamflow data were extracted from USGS and SEO. We gratefully acknowledge the City of Thornton, Denver's Metropolitan Wastewater Reclamation District (MWRD) and the U.S. Environmental Protection Agency (USEPA) for providing the water quality data used in this assessment.

AUID	Description	MILES	Use Tiers		Attainment Status for Applicable Uses					Causes of Impairment	IR Category
			AQLtier	RecTier	Ag	AQLife	Rec	WS			
										Se-D, Zn-D	
COSPCL12b_A	Beaver Brook from the source to Highway 40.	8.43	C2	E	F	F	F	F	None		1
COSPCL13a_A	Mainstem of North Clear Creek, including all tributaries and wetlands, from its source to its confluence with Chase Gulch. and Four Mile Gulch, including all tributaries and wetlands, from their sources to their confluence with North Clear Creek and Eureka Gulch, including all tributaries and wetlands, from its source to its confluence with Gregory Gulch.	31.01	C1	E	F	F	X	F	None		2
COSPCL13b_A	all tributaries and wetlands to North Clear Creek from a point just below the confluence with Chase Gulch to the confluence with Clear Creek, except for the specific listings in Segment 13a.	18.20	C2	E	F	T	F	NA	Cd-D, Fe-D, Mn-D, Zn-D		4a
COSPCL13b_B	Mainstem of N. Clear Creek from a point just below the confluence with Chase Gulch to the confluence with Clear Creek, except for the specific listings in Segment 13a.	7.52	C2	E	F	N	F	NA	Cd-D, Temp, Fe-D, Mn-D, Zn-D		5
COSPCL14a_A	Mainstem of Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to Croke Canal Diversion, and from McIntyre St. to the Denver Water conduit #16 crossing.	1.80	W2	N	F	N	F	F	Temp		5
COSPCL14a_B	Mainstem of Clear Creek from Croke Canal Diversion to McIntyre Street.	1.98	W2	N	F	N	F	F	Temp, Bugs		5
COSPCL14b_A	Mainstem of Clear Creek from the Denver Water conduit #16 crossing to a point just below Youngfield Street in Wheat Ridge, Colorado.	0.52	W2	E	F	N	F	I	Sediment		5
COSPCL15_A	Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.	12.11	W1	E	F	N	N	F	NH3, Sediment, Temp, E. coli		5
COSPCL16a_A	Mainstem of Lena Gulch including all tributaries and wetlands from its source to the inlet of Maple Grove Reservoir.	6.73	W2	E	F	F	X	I	None		5b

Attainment Status for Applicable Uses: F - Use is fully supported T - TMDL completed N - Use is not attaining B - Category 4b Plan completed NA - Use does not apply I - Insufficient data for attainment decision (M&E List) U - Attainment status is unknown X - Use has not been assessed
Tier for Recreational Uses: E - Existing Primary Contact Use P - Potential Primary Contact Use N - Not Primary Contact Use U - Undetermined Use
Tier for Aquatic Life Uses: C1 - Cold water, Class 1 C2 - Cold water, Class 2 W1 - Warm water, Class 1 W2 - Warm water, Class 2 None - No tier defined



INTEGRATED
WATER QUALITY
MONITORING AND
ASSESSMENT
REPORT
COLORADO WATER
QUALITY CONTROL
DIVISION, 2016

The 2016 Colorado Integrated Water Quality Monitoring and Assessment Report provides a comprehensive report of current water quality conditions across the State of Colorado, covering a four-year period between 2012-2015.

The following page is a selection from this document that refers to the Adams County segment of the Clear Creek Corridor, from document page C-5.

The complete document is available at:
https://www.colorado.gov/pacific/sites/default/files/2016-Integrated-Report_FINAL.pdf

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS
Clear Creek Basin

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.					
COSPCL15	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic
Reviewable	Aq Life Warm 1*	Temperature °C	WS-II WS-II	Aluminum	---
	Recreation E		acute chronic	Arsenic	340 0.02(T)
	Water Supply	D.O. (mg/L)	--- 5.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0 ---	Cadmium	TVS TVS
Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 temperature(DM/MWAT) = current condition Expiration Date of 6/30/2019 *Classification: Aquatic life warm 1 goal qualifier. *Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20. *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.		chlorophyll a (mg/m ²)	--- ---	Cadmium	5.0(T) ---
		E. Coli (per 100 mL)	--- 126	Chromium III	50(T) TVS
		Inorganic (mg/L)		Chromium VI	TVS TVS
			acute chronic	Copper	TVS TVS
		Ammonia	TVS TVS	Iron	--- WS
		Boron	--- 0.75	Iron	--- 1000(T)
		Chloride	--- 250	Lead	TVS TVS
		Chlorine	0.019 0.011	Lead	50(T) ---
		Cyanide	0.005 ---	Manganese	TVS TVS
		Nitrate	10 ---	Manganese	--- WS
		Nitrite	--- 0.5	Mercury	--- 0.01(t)
		Phosphorus	--- ---	Molybdenum	--- 150(T)
		Sulfate	--- WS	Nickel	TVS TVS
		Sulfide	--- 0.002	Nickel	--- 100(T)
				Selenium	TVS TVS
				Silver	TVS TVS
				Uranium	--- ---
				Zinc	TVSx1.57* TVSx1.57*

16a. Mainstem of Lena Gulch including all tributaries and wetlands from its source to the inlet of Maple Grove Reservoir.					
COSPCL16A	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic
UP	Aq Life Warm 2	Temperature °C	WS-II WS-II	Aluminum	---
	Recreation E		acute chronic	Arsenic	340 0.02-10(T) ^A
	Water Supply	D.O. (mg/L)	--- 5.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0 ---	Cadmium	TVS TVS
Other:		chlorophyll a (mg/m ²)	--- 150	Cadmium	5.0(T) ---
		E. Coli (per 100 mL)	--- 126	Chromium III	50(T) TVS
		Inorganic (mg/L)		Chromium VI	TVS TVS
			acute chronic	Copper	TVS TVS
		Ammonia	TVS TVS	Iron	--- WS
		Boron	--- 0.75	Iron	--- 1000(T)
		Chloride	--- 250	Lead	TVS TVS
		Chlorine	0.019 0.011	Lead	50(T) ---
		Cyanide	0.005 ---	Manganese	TVS TVS
		Nitrate	10 ---	Manganese	--- WS
		Nitrite	--- 0.05	Mercury	--- 0.01(t)
		Phosphorus	--- 0.17	Molybdenum	--- 150(T)
		Sulfate	--- WS	Nickel	TVS TVS
		Sulfide	--- 0.002	Nickel	--- 100(T)
				Selenium	TVS TVS
				Silver	TVS TVS
				Uranium	--- ---
				Zinc	TVS TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

CLASSIFICATIONS AND NUMERIC
STANDARDS FOR SOUTH PLATTE
RIVER BASIN, LARAMIE RIVER
BASIN, REPUBLICAN RIVER
BASIN, SMOKY HILL RIVER BASIN

APPENDIX
38-1 STREAM
CLASSIFICATIONS
AND WATER QUALITY
STANDARDS TABLES
COLORADO DEPT
OF PUBLIC HEALTH
AND ENVIRONMENT
WATER QUALITY
CONTROL
COMMISSION, JUNE,
2016.

The 2016 Colorado Department
of Public Health and Environment
Water Quality Commission Stream
Classification and Water Quality Report
details the presence and concentration
of contaminants in streams throughout
Colorado.

The following page is a selection from
this document that refers to the Adams
County segment of the Clear Creek
Corridor, from document page 57

The complete document is available
at: [http://lrewater.com/wp-content/
uploads/2017/03/Regulation_38.pdf](http://lrewater.com/wp-content/uploads/2017/03/Regulation_38.pdf)

